Professional-Technical Education # 361

Family and Consumer Sciences Education

Nutrition & Foods

Activity/Resource Guide
August, 1999

Grades 11-12

Developed by
The University of Idaho
Family and Consumer Sciences
for
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Introduction

The purpose of these materials is to assist teachers and administrators in developing a Nutrition and Food experience. It is hoped that teachers will use these activities as a basis for planning an experience that exposes students to knowledge and skills common to nutrition and food related occupations.

This introductory course will:

1. Evaluate factors affecting individual and family food choices
2. Analyze nutrition, health and wellness practices across the life span
3. Employ food laboratory management techniques
4. Demonstrate the management of food and resources for individuals and families
5. Demonstrate the preparation of nutritious foods for individuals and families
6. Analyze career options within nutrition, foods, and related fields

What Does a Typical Classroom Look Like?

Because this course emphasizes full-class participation, teamwork, and individual projects and/or study, there should be enough room for tables, chairs, equipment, and lab stations. Accommodations should be made for work stations with electrical outlets. There should be enough storage space to contain resources, display activities, materials, software, and unfinished projects.

Both reusable and consumable instructional materials are generally used in this experience. If there is not enough money in the school budget to purchase materials, equipment, and books, outside funding and/or in-kind services may be required. Some teachers may need to develop classroom materials themselves. If so, adequate time for developing the materials should be allowed.

Equipment might include an overhead projector, computers, videos/VCR's, camcorders, microcomputer courseware, and video courseware. Special locks or other security precautions may be taken to protect equipment.

The teacher is the instructional facilitator and the manager of the classroom environment and resources. He/she helps students identify instructional goals and creative activities, moves about the classroom observing and giving assistance, and works with other teachers to plan and deliver the curriculum. The students are active rather than passive learners. They do individual and group work. They develop skills through hands-on activities, test theories, and relate and/or apply what they learn. The classroom is always alive with activity, sounds, and conversation. The purpose of this curriculum is to help students make connections. The one condition that makes this happen is teachers planning and teaching together. Teachers can work together to integrate the curriculum.

At least one teacher on the team is vocationally certified in Family and Consumer Sciences. The teachers should regularly attend in-service activities and conferences to update and upgrade teaching and content knowledge. Internships for the instructors are recommended to stay current in business and industry techniques.

Sample Activities

The following activities can be used as supplements to the curriculum framework to teach the competencies. These activities may be used as written or adapted to meet the needs and abilities of individual students. Teachers should consider other combinations and activities.

Activity 1	Why We Eat
Activity 2	Effects of Culture, Region, and Personal Beliefs on Food Choices–Activities
Activity 3	Using Guest Speakers
Activity 4	Approximate Number of Calories "Burned" in One Hour
Activity 5	Nutrient Density
Activity 6	What's My Line?
Activity 7	Nutrition News!
Activity 8	Exercise Planning
Activity 9	Supplements for Muscle Gain
Activity 10	Aerobic Exercise
Activity 11	Snack Wise
Activity 12	How to Identify Weight Loss Fraud
Activity 13	The Dietary Guidelines
Activity 14	Dietary Guidelines for the Family
Activity 15	Dietary Guideline Recipes
Activity 16	Nutritious Meal Lab Experience: Ramen Noodle Stir Fry
Activity 17	Pyramid Pizzazz!!
Activity 18	Nutrition Update: Truth or Baloney
Activity 19	Nutrition in the News
Activity 20	Just Say "NO!" To Dieting
Activity 21	Healthy Weight Advertising
Activity 22	Appliance Groups
Activity 23	Equipment BINGO
Activity 24	Equipment Jeopardy
Activity 25	What a Cut Up!
Activity 26	Time Saving Kitchen Equipment
Activity 27	Food Lab Guidelines
Activity 28	Labeling and You
Activity 29	Label Guess
Activity 30	Technology and Grocery Shopping: "Let Online Grocery Stores Simplify Your Life with Hassle-Free Grocery Shopping!"
Activity 31	Food Safety and Sanitation
Activity 32	Fast Food Facts
Activity 33	Eating Etiquette & Table Manners
Activity 34	Measuring Race

The following activities correspond with the Nutrition and Food curriculum framework competencies. This is *only* a guide. The list does not limit other possible combinations and should only be used as a reference. This chart shows which sample activities help teach more than one competency and also the variety of activities for a particular competency.

Competencies		**Sample Activity**
01.	**Evaluate Factors Affecting Individual and Family Food Choices**	
01.01	Analyze Factors Affecting Food Choice	1, 2, 3, 30
01.02	Explore the Effects of Culture and Region on Food Customs	1, 2, 3
01.03	Evaluate the Effect of the Family Life Cycle on Food Choices	1, 3, 30, 32
02.	**Analyze Nutrition, Health, and Wellness Practices Across the Life Span**	
02.01	Examine the Benefits of Good Nutrition on Personal Health and Well Being	3, 4, 7, 8, 9, 10, 17, 21
02.02	Evaluate the Nutrient Needs and Sources for Individuals and Families	3, 5, 6, 7, 9, 11, 12, 13, 14, 15, 17, 18, 19, 32, 47, 51
02.03	Analyze the Relationship Between Nutrition and Health	3, 4, 5, 7, 8, 9, 10, 11, 17, 20, 21, 32
02.04	Analyze Health Concerns and Considerations in Relation to Nutrition Practices	3, 4, 7, 9, 10, 12, 13, 14, 18, 19, 20, 21
02.05	Evaluate Nutritional Needs for Individuals Throughout the Life Cycle	3, 7, 14
02.06	Demonstrate a Daily Food Intake Plan	3, 6, 11, 12, 13, 14, 15, 16, 17, 19, 28, 29

03.	**Employ Food Laboratory Management Techniques**	
03.01	Utilize Laboratory Equipment and Workplace	3, 22, 23, 24, 25, 26, 27, 34
03.02	Practice Laboratory Safety and Sanitation Techniques	3, 16, 23, 24, 25, 27, 31
04.	**Demonstrate the Management of Food for Individuals and Families**	
04.01	Examine Food-Purchasing Techniques	3, 7, 28, 29, 30, 38, 39, 42
04.02	Demonstrate Basic Food Selection and Storage Techniques	3, 32, 36, 37, 38, 39, 41, 46, 47, 49, 50
04.03	Practice Food Safety and Sanitation Techniques	3, 7, 16, 27, 31, 40, 41, 43, 44, 45, 46, 47
04.04	Demonstrate Meal Management Issues and Techniques	3, 32
04.05	Demonstrate Meal Planning Issues and Techniques	3, 5, 11, 15, 16, 32, 44, 45
04.06	Develop Skills to Foster a Positive Mealtime Environment	3, 33
04.07	Evaluate the Impact of Sciences and Technology on Food Composition, Safety, and Other Issues	3, 7, 12, 42
05.	**Demonstrate the Preparation of Nutritious Food for Individuals and Families**	
05.01	Demonstrate Basic Food Preparation Skills	3, 16, 34, 35, 48, 50
05.02	Explore and Prepare Nutritious Meals Using Fruits and Vegetables	3, 16, 35, 36, 37, 38
05.03	Explore and Prepare Nutritious Foods Using the Milk Food Group	3, 39, 40, 41, 42

05.04	Explore and Prepare Nutritious Foods Using Meat, Poultry, Fish, Eggs, and Legumes	3, 43, 44, 45, 46, 47
05.05	Explore and Prepare Nutritious Foods Using Breads, Cereal, Rice, and Pasta	3, 16, 48, 49, 50, 51
05.06	Prepare and Evaluate a Variety of Nutritious Food Combinations	3, 11
06.	**Analyze Career Options Within Nutrition, Foods, and Related Fields**	
06.01	Explore Occupations Within Food Related Industries	3
06.02	Evaluate Job Qualifications	3

OPTIONAL ENHANCEMENT:

06.03	Develop a Business Plan for Starting a Food or Nutrition Related Business	3

01. Evaluate Factors Affecting Individual and Family Food Choices

Competencies		Activities
01.01	Analyze Factors Affecting Food Choice	1, 2, 3, 32
01.02	Explore the Effects of Culture and Region on Food Customs	1, 2, 3
01.03	Evaluate the Effect of the Family Life Cycle on Food Choices	1, 3, 30, 32

RESOURCES

Web Sites

- Tufts Nutrition Navigator
  http://navigator.tufts.edu

The Tufts University Nutrition Navigator is the first online rating and review guide that solves the two major problems Web users have when seeking nutrition information: how to quickly find information best suited to their needs, and whether to trust the information they find there. The Tufts University Nutrition Navigator is designed to help you sort through the large volumes of nutrition information on the Internet and find accurate, useful nutrition information you can trust.

- March of Dimes Birth Defects Foundation
  www.modimes.org

- National Center for Education in Maternal and Child Health Care
  www.ncemch.georgetown.edu

- Nutrition on the Web (NOW) for Teens
  http://library.advacned.org/10991/

Guest Speakers

- Religious leader/representative from several different religious backgrounds - discuss religious dietary laws, etiquette, and food preparation techniques.

- Native of another country/chef of an ethnic restaurant/foreign exchange student - discuss food customs of the culture he/she represents.

02. Analyze Nutrition, Health, and Wellness Practices Across the Life Span

Competencies		Activities
02.01	Examine the Benefits of Good Nutrition on Personal Health and Well Being	4, 7, 8, 9, 10, 17, 21
02.02	Evaluate the Nutrient Needs and Sources for Individuals and Families	5, 6, 7, 9, 11, 12, 13, 14, 15, 17, 18, 19, 32 47, 51
02.03	Analyze the Relationship Between Nutrition and Health	4, 5, 7, 8, 9, 10, 11, 17, 20
02.04	Analyze Health Concerns and Considerations in Relation to Nutrition Practices	4, 7, 9, 10, 12, 13, 14, 18, 19, 20, 21
02.05	Evaluate Nutritional Needs for Individuals Throughout the Life Cycle	7, 14
02.06	Demonstrate a Daily Food Intake Plan	6, 11, 12, 13, 14, 15, 16, 17, 19

RESOURCES

Brochures/publications

- *Winning Nutrition for Athletes*—Brochure
  Presidential Sports Award -The Challenge—Brochure
  Sports Nutrition—Q&A, and Fast Facts—Brochure
  Printed by: The Sugar Association in cooperation with the President's Council on Physical Fitness and Sports
  1101 15th Street, NW, Suite 600
  Washington DC, 20005
  Phone: 202-785-1122
  Fax: 202-785-5019

- *"Should you go on a Diet?"*—Reprint from FDA Consumer Magazine, May 1997. Pub. # (FDA) 97-1214.

- *"How to Identify Weight Loss Fraud"*—Francis M. Berg. Healthy Weight Network. Available on web site: **www.healthyweightnetwork.com/fraud.htm**

Curriculum

- Pyramid Plus – A Nutrition Guide to Food Choices for Better Health
  Idaho Dairy Council (Free to teachers): 208-327-7050

Web Sites

Food and Drug Administration
www.fda.gov

Something Fishy
www.something-fishy.org
Information on eating disorders.

American Institute of Nutrition
www.faseb.org/ain/

American Dietetic Association
www.eatright.org

Healthy Weight Network
www.healthyweightnetwork.com

National Institutes of Health (NIH)
www.nih.gov

Veggies Unite!
www.vegweb.com

Vegetarian Resource Group
www.vrg.org

Cyber Diet
www.cyberdiet.com
Provides customized nutritional profiles, meal planners, and a tracking system that tallies fat grams and calories.

Guest Speakers

- Physician/Registered Dietician – discuss with the class weight control/maintenance issues, "miracle" or "fad" diets, and eating habits and their consequences.

- Physical education teacher – demonstrate exercises to improve flexibility, condition muscles, strengthen the heart, etc. Discuss how a person can judge the potential value of specific exercises. What health and safety considerations should a person take in selecting an exercise program?

03. Employ Food Laboratory Management Techniques

Competencies	Activities
03.01 Utilize Laboratory Equipment and Work Space	22, 23, 24, 25, 26, 27, 34
03.02 Practice Laboratory Safety and Sanitation Techniques	16, 23, 24, 25, 27, 31

RESOURCES

Web Sites

Centers for Disease Control
www.cdc.gov

National Food Safety Educator's Network
E mail: **EdNet-L@foodsafety.gov**

Ed Net is an electronic newsletter from the Food and Drug Administration (FDA), Food Safety and Inspection Services (FSIS), and the Centers for Disease Control (CDC), providing food safety activities to educators and others concerned about food safety.

- Fight BAC!
  www.FoodSafety.gov

Internet sight providing information about consumer food safety education. They publish and post online BAC Talk, the official newsletter of the Fight BAC campaign.

- Food Safety web site
  www.FoodSafety.gov

A new web site developed by the FAD, DFSAN, and USDA which provides a "gateway" to government food safety information including, hot topics in food safety, links to key sights, a search engine and index.

Contacts

- Centers for Disease Control and Prevention Foodborne Illness Line
  1-404-332-4597

National Center for Food Safety and Technology
1-708-563-1576

- FDA Consumer Complaints
  1-303-443-1240

National Center for Nutrition and Dietetics of the American Dietetic Association
  Consumer Nutrition Hot Line
  1-800-366-1655
  Food Marketing Institute 1-202-429-8293

USDA/DA Foodborne Illness Education Information Center
  1-301-504-5719
  FAX: 1-301-504-6409

Student Workshop#

University of Idaho Extension—Food Safety Program

Contact: Sandra McCurdy, Food Safety Coordinator

Phone: (208) 885-6972

The Food Safety Program is dedicated to improving food safety by reducing foodborne risks and promoting safe food handling practices for Idaho consumers, food providers, and food processors, and promoting a safe, affordable, and adequate food supply for Idaho consumers.

OFFERING: A four-hour food safety workshop for (it can be held in one day or ever several days) students. Upon completion, students will receive a Health and Welfare Food Safety Card. Contact Sandra McCurdy for an extension agent in your area.

04. Demonstrate the Management of Food for Individuals and Families

Competencies		Activities
04.01	Examine Food-Purchasing Techniques	7, 28, 29, 30, 38, 39, 42
04.02	Demonstrate Basic Food Selection and Storage Techniques	32, 36, 37, 38, 39, 41, 46, 47, 49, 50
04.03	Practice Food Safety and Sanitation Techniques	7, 16, 27, 31, 40, 41, 43, 44, 45, 46, 47
04.04	Demonstrate Meal Management Issues and Techniques	32
04.05	Demonstrate Meal Planning Issues and Techniques	5, 11, 15, 16, 32, 44, 45
04.06	Develop Skills to Foster a Positive Mealtime Environment	33
04.07	Evaluate the Impact of Sciences and Technology on Food Composition, Safety, and Other Issues	7, 12, 42

RESOURCES

Web Sites

- USDA Food and Nutrition Services—Information on Federal Food Assistance Programs
  www.usda.gob/fcs/fcs.htm

- Kraft Interactive Kitchen
  www.kraftfood.com

This web site has accessible recipes for last minute meals. Tell Draft which ingredients you have on hand and get an instant list of recipes using those ingredients. Create a personalized plan of new meal ideas.

- Family Food Zone

  www.familyfoodzone.com

This interactive site gives adults valid information about making healthy food choices for children. Family Food Zone is affiliated with the National Dairy Council and is supported and revised by Registered Dieticians.

Curriculum/Materials

Shop Smart! Supermarket Shopping in the 90's.
Gossett, Linda S. University of Idaho, Extension Educator.
$30.00 (includes 3 ring binder, overheads, and video)
Contact: Agricultural Publications - University of Idaho
Moscow, ID 83844-2240
Phone: (208) 885-7982
Fax: (208) 885-4648 - email: cking@uidaho.edu

30 minute lesson and video. Curriculum focuses on describing supermarket advertising for food consumers with limited resources.

- *Label Ease – A Handful of Nutrition Facts* – Tear Pad, 50 Sheets 8 ½" x 11".

Idaho Dairy Council (free to teachers): 1-208-327-7050.
Help educate students about reading food labels easily and effectively.

Guest Speakers

Spokesperson from a local food assistance program- discuss information on funding, eligibility for assistance, need within the community, volunteer opportunities, and social and emotional implications on individuals and families.

05. Demonstrate the Preparation of Nutritious Foods for Individuals and Families

Competencies		Activities
05.01	Demonstrate Basic Food Preparation Skills	16, 34, 35, 48, 50
05.02	Explore and Prepare Nutritious Meals Using Fruits and Vegetables	16, 35, 36, 37, 38
05.03	Explore and Prepare Nutritious Foods Using the Milk Food Group	39, 40, 41, 42
05.04	Explore and Prepare Nutritious Foods Using Meat, Poultry, Fish, Eggs and Legumes	43, 44, 45, 46, 47
05.05	Explore and Prepare Nutritious Foods Using Breads, Cereal, Rice, and Pasta	16, 48, 49, 50, 51
05.06	Prepare and Evaluate a Variety of Nutritious Food Combinations	11

RESOURCES

Web sites (general)

- Food and Nutrition Information Center
  www.nal.usda.gov/fnic/
- SoupRecipe.com
  www.souprecipe.com
- PieRecipe.com
  www.pierecipe.com
- CakeRecipe.com
  www.cakerecipe.com
- ThanksgivingRecipe.com
  www.thanksgivingrecipe.com

ChristmasRecipe.com
www.christmasrecipe.com

CookieRecipe.com
www.cookierecipe.com

Aunt Edna's Kitchen
www.cei.net/~terry/auntedna/index.html

This web site contains hundreds of categorized recipe files, nutrition links, a cooking utilities link which includes ingredient substitutions, weight conversion tables, etc. and links to brand name foods and companies.

Fruits &Vegetable Resources

- Dole 5 A Day web site
  www.dole5aday.com
  (includes educational materials, fruit and vegetable related info.)

- California Grapes
  www.tablegrapes.com/classroom/classrooms.htm
  (free educational materials, and lesson plans)

- Florida Citrus
  www.floridajuice.com/floridacitrus/health.htm
  (educational & health information on citrus fruits)

Milk Group Resources

- Got Milk?
  www.whymilk.com

- National Dairy Council
  www.nationaldairycouncil.org
  (free teaching material to teachers)

- Idaho Dairy Council
  1365 N. Orchard St. #203
  Boise, ID 83706
  FAX: 208-327-7054
  Phone: 208-327-7050

Meat/Poultry/Fish/Egg Resources

- USDA's Meat & Poultry Hotline
  1-800-535-4555

- ChickenRecipe.com
  www.chickenrecipe.com

- Tyson Chicken Recipes
  www.tyson.com/chicken/

- National Cattleman's Beef Association
  www.beef.org

- Beef Nutrition Organization
  www.beefnutrition.org

- Idaho Beef Council
  212 S. Cole Road
  Boise, ID 83709-0934
  Phone: 208-376-6004
  FAX: 208-376-6002

- American Egg Board
  www.aeb.org
  (includes recipes, nutritional and health info., publications, and free materials)

Breads/Grains/Rice/Pasta Resources

- Grains Nutrition Information Center
  www.wheatfoods.com

- PastaRecipe.com
  www.pastarecipe.com

- BreadRecipe.com
  www.breadrecipe.com

06. Analyze Career Options Within Nutrition, Foods, and Related Fields

Competencies **Activities**

06.01 Explore Occupations Within Food Related Industries

06.02 Evaluate Job Qualifications

OPTIONAL ENHANCEMENT

06.03 Develop a Business Plan for Starting a Food or Nutrition Related Business.

RESOURCES

Culinary Schools

- Culinary Institute of America
  www.ciachef.edu/default.html
  1-800-CULINARY

- Art Institute of Seattle – Culinary Arts Program
  www.ais.edu
  2323 Elliot Avenue
  Seattle, WA 98121
  1-800-275-2471

- College of Southern Idaho Culinary Arts Program
  http://www.csi.cc.id.us/L4.CFM?chef
  Contact Person: Larry Motzner
  Desert Building Rm. 107-A
  315 Falls Avenue P O Box 1238
  Twin Falls, ID 83303-1238
  Phone: 208-733-9554 or 800-680-0274, ext. 2380

- Boise State University Culinary Arts Program
  http://www.boisestate.edu/regstrar/9697cat/culin.htm
  Registrar Phone: (208) 426-3486

Teacher Workshops

- **Culinary Arts Summer Workshops for Educators**
  Art Institute of Seattle (held each July)
  Registration Information: 1-800-275-2471
  Email: **wellsc@aii.edu** – web site: **http://www.ais.edu/workshops.htm**

The goal of all the workshops is to provide you with new ideas for your classroom and valuable career information to pass along to your students. Every class is taught by a member of our professional staff, most of whom continue to work in the field as well as teach. Each workshop is a hands-on experience. Classroom projects will provide you with specific lesson plans to take home. Field trips may be taken to local businesses to give you a clear understanding of what is happening in the industry today. Emphasis is placed on providing you with up-to-date information on trends and changes in the different fields, including the use of computers.

Activity 1: Why We Eat

Competencies addressed by this activity:

1.0	**Evaluate Factors Affecting Individual and Family Food Choices**
01.01	Analyze Factors Affecting Food and Nutrition Choices
01.02	Explore the Effects of Culture and Region on Food Customs
01.03	Evaluate the Effect of the Family Life Cycle on Food Choices

Activity: 1

Why We Eat

Name_____ Class_____

DIRECTIONS: Complete the following sentences with your personal preferences listing at least two food choices for each.

1. Foods I eat that my ancestors ate and my family still eats……

2. Foods I eat because of my religious beliefs……

3. Foods I eat because of my life style……

4. Foods I eat with friends……

5. Foods I do not eat because of my religious beliefs……

6. Foods I eat that originated in another country……

7. Foods that my family likes, but I do not……

8. Foods I eat because they are plentiful in this area……

Our food choices develop because of many reasons—not always because we like the way a particular food tastes.

Explain the following reasons for eating:

- Psychological
- Cultural (geographical)
- Religious
- Social (activities)
- Life-style
- Individual preferences
- Nutritional choices

SUMMARY QUESTIONS:

- Identify three psychological reasons people give for eating
  (ANGRY, HAPPY, DEPRESSED, etc.)
- Name three foods that would be good nutritional choices
  (ANSWERS WILL VARY)
- List three foods commonly eaten in a fast paced modern society.
  (ANSWERS WILL VARY)

Activity 2: Effects of Culture, Region, and Personal Beliefs on Food Choices–Activities

Competencies addressed by this activity:

1.0	**Evaluate Factors Affecting Individual and Family Food Choices**
01.01	Analyze Factors Affecting Food and Nutrition Choices
01.02	Explore the Effects of Culture and Region on Food Customs

Activity:	**2**

Effects of Culture, Region, and Personal Beliefs on Food Choices—Activities

SUGGESTED ACTIVITIES/LABS:

- Assign students to small groups and assign each a different country or region of the U.S. where cuisine varies between regions and classes. As a group, students should identify a specific cuisine and then assign each one to a group member. Each group member should then describe and/or prepare a dish representing that region or class. Hold a one day tasting or have each group serve food on different days.

Activity 3: Using Guest Speakers

Competencies addressed by this activity:

01.	**Evaluate Factors Affecting Individual and Family Food Choices**
01.01	Analyze Factors Affecting Food Choice
01.02	Explore the Effects of Culture and Region on Food Customs
01.03	Evaluate the Effect of the Family Life Cycle on Food Choices
02.	**Analyze Nutrition, Health, and Wellness Practices Across the Life Span**
02.01	Examine the Benefits of Good Nutrition on Personal Health and Well Being
02.02	Evaluate the Nutrient Needs and Sources for Individuals and Families
02.03	Analyze the Relationship Between Nutrition and Health
02.04	Analyze Health Concerns and Considerations in Relation to Nutrition Practices
02.05	Evaluate Nutritional Needs for Individuals Throughout the Life Cycle
02.06	Demonstrate a Daily Food Intake Plan
03.	**Employ Food Laboratory Management Techniques**
03.01	Utilize Laboratory Equipment and Workspace
03.02	Practice Laboratory Safety and Sanitation Techniques
04.	**Demonstrate the Management of Food for Individuals and Families**
04.01	Examine Food-Purchasing Techniques
04.02	Demonstrate Basic Food Selection and Storage Techniques
04.03	Practice Food Safety and Sanitation Techniques
04.04	Demonstrate Meal Management Issues and Techniques
04.05	Demonstrate Meal Planning Issues and Techniques
04.06	Develop Skills to Foster a Positive Mealtime Environment
04.07	Evaluate the Impact of Sciences and Technology on Food Composition, Safety, and Other Issues
05.	**Demonstrate the Preparation of Nutritious Foods for Individuals and Families**
05.01	Demonstrate Basic Food Preparation Skills
05.02	Explore and Prepare Nutritious Meals Using Fruits and Vegetables
05.03	Explore and Prepare Nutritious Meals Using the Milk Food Group
05.04	Explore and Prepare Nutritious Foods Using Meat, Poultry, Fish, Eggs and Legumes
05.05	Explore and Prepare Nutritious Foods Using Breads, Cereal, Rice, and Pasta

05.06 Prepare and Evaluate a Variety of Nutritious Food Combinations

06. Analyze Career Options Within Nutrition, Foods, and Related Fields

06.01 Explore Occupations Within Food Related Industries

06.02 Evaluate Job Qualifications

OPTIONAL ENHANCEMENT

06.03 Develop a Business Plan for Starting a Food or Nutrition Related Business

Activity: 3

Using Guest Speakers

To assist the guest speaker in addressing relevant human services occupations information, a list of desired topics and student/classroom information should be provided to him or her prior to the presentation.

The true value of a guest speaker can be found in student activities conducted before and after the classroom presentation. To increase the educational value of guest speakers, it is critical that students prepare for, reflect on, and apply the information that is gained.

GUIDELINES:

- Determine the topic or objectives for the presentation
- Involve students in the planning process
- Request your administrator's permission
- Select the firm, organization, or individual keeping in mind the students' ages, interests, and abilities
- Provide the speaker with necessary facts, including:
  - size of class
  - date, time, and place
  - duration of presentation
  - grade/age of class
  - topic or objectives to be covered
  - follow-up activity that is planned
  - interests/abilities of students
  - availability of audio/visual equipment
- Confirm the arrangement two or three days before the scheduled date of the activity
- Explain to students why the activity has been planned
- Stress the importance of good behavior and appearance
- Assign a student to greet the guest speaker
- Express formal appreciation at the end of the session

PRE-GUEST SPEAKER ACTIVITIES:

- Identify topics that interest your students
- Research the topic
- Have students develop questions for the guest speaker

POST-GUEST SPEAKER ACTIVITIES:

- Discuss the information provided by the speaker
- Evaluate the presentation
- Conduct additional research on the topic
- Summarize the speaker's information

- Send formal letters of appreciation to the speaker

GUEST SPEAKER CHECKLIST

DO:

_____Determine a definite date and time before contacting the speaker.

_____Get approval from the designated official at your school.

_____Contact the speaker.

_____Confirm the date in writing after arrangements have been made. Be sure to include a map and instructions for front office check-in.

_____Contact the speaker a day or so before to remind him/her of the presentation.

_____Be sure the speaker knows in advance the sizes of your class, as well as your students' ages and abilities.

_____Ensure that the speaker is welcomed and properly introduced.

_____Remind the students why the speaker is presenting.

_____Thank the speaker for his or her time. Send a written letter of appreciation in which you share one or two student outcomes.

DON'T:

_____Keep a speaker waiting.

_____Assume the speaker knows anything about your students.

_____Schedule a speaker early in the morning or late in the afternoon, especially if he or she has to travel far.

_____Assign students to hear a speaker if they have little or no interest in the topic, or do not know why the speaker is presenting.

Activity 4: Approximate Number of Calories "Burned" in One Hour

Competencies addressed by this activity:

02.	**Analyze Nutrition, Health, and Wellness Practices Across the Life Span**
02.01	Examine the Benefits of Good Nutrition on Personal Health and Well Being
02.03	Analyze the Relationship Between Nutrition and Health
02.04	Analyze Health Concerns and Considerations in Relation to Nutrition Practices

Activity: 4

Approximate Number of Calories "Burned" in One Hour

The number of calories that an athlete uses in one hour depends on how much the person weighs, and the intensity and duration of the activity. Here's a look at the calories you burn during popular activities.

ACTIVITY	110lbs.	125lbs.	150lbs.	175lbs.	205lbs.
Baseball	204	234	282	324	384
Basketball	414	462	564	660	762
Bicycling					
9.4mph	300	3336	408	480	552
17mph	376	428	513	598	701
Field Hockey	402	450	546	642	738
Football	330	444	540	612	726
Golf	258	288	348	408	465
Gymnastics	198	222	270	318	366
Running Level					
8 min/mile	648	714	852	990	1134
6 min/mile	834	900	1038	1176	1320
Soccer	384	450	540	624	732

Swimming					
backstroke	510	570	690	810	930
breast stroke	486	546	660	780	894
crawl	468	522	636	750	864
Tennis	330	366	444	522	600
Volleyball	150	168	204	240	288
Walking	240	270	324	384	444
Wrestling	552	642	780	900	1050

Activity 5: Nutrient Density

Competencies addressed by this activity:

02.	**Analyze Nutrition, Health, and Wellness Practices Across the Life Span**
02.02	Evaluate the Nutrient Needs and Sources for Individuals and Families
02.03	Analyze the Relationship Between Nutrition and Health
04.	**Demonstrate the Management of Food for Individuals and Families**
04.05	Demonstrate Meal Planning Issues and Techniques

Activity: 5

Nutrient Density

RESOURCES NEEDED: Food Comparison Cards – available free to teachers from the Idaho Dairy Council (208) 327-7050**.**

DIRECTIONS: Have the following food comparison cards on display for the students to see: macaroni and cheese, soft drink, orange juice, milk, french fries, cantaloupe, tomato, cheeseburger, baked potato, chocolate cake, doughnuts. Ask students to select and arrange the foods highest in nutrient density through those lowest in nutrient density. Analyze the cards with the highest nutrient levels.

Dense means thick or full. A food that is nutrient dense has a higher percentage of nutrients in relation to its calories. Energy or calories are the standard measures of energy from food. A calorie is a measure of the amount of heat it takes to raise the temperature of water one-degree.

Explain how to use the food comparison cards by comparing the amount of calories to the number of bars that exceed the calorie or energy bar line. Foods that are high in calories, but low in nutrients, are called empty calorie foods.

Not very many foods contain large amounts of nutrients. That's why we need to eat a variety of foods to get the nutrients our bodies need to work and run well.

Use the food comparison cards to build a meal. Start with a roast beef sandwich—bread, butter, and roast beef. Build on other foods to get high nutrition in each area.

SUMMARY QUESTIONS:

1. A nutrient dense food has more what than calories?
   NUTRIENTS
2. What is another name for food energy?
   CALORIES
3. Why is it important to eat a wide variety of foods?
   NOT MANY FOODS CONTAIN SEVERAL NUTRIENTS. WE NEED A VARIETY OF FOODS TO GET ALL THE NUTRIENTS WE NEED.

Activity 6: What's My Line?

Competencies addressed by this activity:

02.	**Analyze Nutrition, Health, and Wellness Practices Across the Life Span**
02.02	Evaluate the Nutrient Needs and Sources for Individuals and Families
02.06	Demonstrate a Daily Food Intake Plan

Activity: 6

What's My Line?

DIRECTIONS: List the following nutrients on the board. There are several extra ones. In turn, have students come to the front of the room as Nutrient Mystery Guests. Divide class into two teams. Each mystery guest reads one clue from his/her cue card (starting with #1). After each clue, one student from a team tries to guess the nutrient (rotate teams after each clue). Add one point for every clue used. The team with the fewest points at the end of the game wins. Clues are listed in order of their difficulty.

PROTEIN	**VITAMIN A**	**IODINE**	**CARBOHYDRATES**
VITAMIN D	**FAT**	**VITAMIN C**	**IRON**
B VITAMINS	**CALCIUM**	**WATER**	**MAGNESIUM**
SODIUM	**CHLORIDE**	**POTASSIUM**	

FAT

1. I carry vitamins A, D, E, and K.
2. I give twice as many calories per gram as carbohydrates.
3. I come in polyunsaturated and saturated forms.
4. I protect vital organs.

VITAMIN D

1. I help the body use calcium and phosphorus.
2. Your body makes me when exposed to sunlight.
3. Milk is fortified with me.
4. I am called the Sunshine Vitamin.

CARBOHYDRATES

1. I am broken into glucose to be used as fuel for the body.
2. I can be complex or simple.
3. I come in three forms sugar, starch, and fiber.
4. I am your main energy source.

IODINE

1. I help the thyroid gland control your growth.
2. Seafood contains lots of me.
3. I prevent goiter.

4. I am such a necessary nutrient that I am added to salt.

VITAMIN A

1. I keep skin looking smooth and satiny.
2. I help prevent night blindness.
3. I can be stored in fat in the body.
4. Deep yellow and dark green fruits and vegetables are good sources of me.

PROTEIN

1. I am made of amino acids.
2. I repair tissues and help you grow.
3. Every cell in your body is made of me.
4. Excellent sources of me are meat, fish, poultry, and eggs.

VITAMIN C

1. I am water soluble, so you need some of me every day.
2. Without me, you might bruise easily and have bleeding gums.
3. Citrus fruits, tomatoes, strawberries are good sources of me.
4. I help prevent the dreaded common cold.

IRON

1. I carry oxygen in the blood.
2. I prevent anemia.
3. I help turn food into energy.
4. Good sources are meat, eggs, leafy vegetables, and whole grains.

B VITAMINS

1. I help keep your appetite and digestion normal.
2. I help keep your nervous system healthy.
3. I am water-soluble.
4. Good sources are milk, meat, enriched grain products.

CALCIUM

1. I control your heartbeat and muscles.
2. I work with phosphorus and Vitamin D as a team.
3. I am a mainly found in dairy products.
4. Most of me is found in your bones and teeth.

WATER

1. I am part of every cell.
2. I am often a forgotten nutrient.
3. I carry nutrients to cells and remove wastes.
4. I make up two-thirds of you body weight.

SUMMARY QUESTIONS:

1. What nutrient gives twice as many calories as carbohydrates?
   FAT

2. Which nutrient helps prevent anemia?
   IRON

3. What is the body's main energy source?
   CARBOHYDRATES

Activity 7: Nutrition is News!

Competencies addressed by this activity:

02.	**Analyze Nutrition, Health, and Wellness Practices Across the Life Span**
02.01	Examine the Benefits of Good Nutrition on Personal Health and Well Being
02.02	Evaluate the Nutrient Needs and Sources for Individuals and Families
02.03	Analyze the Relationship Between Nutrition and Health
02.04	Analyze Health Concerns and Considerations in Relation to Nutrition Practices
02.05	Evaluate Nutritional Needs for Individuals Throughout the Life Cycle
04.	**Demonstrate the Management of Food for Individuals and Families**
04.01	Examine Food-Purchasing Techniques
04.03	Practice Food Safety and Sanitation Techniques
04.07	Evaluate the Impact of Sciences and Technology on Food Composition, Safety, and Other Issues

Activity: 7

Nutrition is News!

Name_____ Class_____

DIRECTIONS: Look through current periodicals (newspapers or magazines) or the Internet. Find two articles dealing with nutrition, clip them out, and mount them on a piece of paper. Write a paragraph (AT LEAST 15 SENTENCES EACH) explaining what each article is about. Attach the articles to your paragraphs and give them to your teacher. Be sure to label your paper with "NUTRITION IS NEWS" at the top. Include your name, date, and number on your paper. The teacher will correct this activity for you.

Each paragraph about an article is worth 15 points. Be sure the articles are attached to the paragraphs to receive full credit.

Activity 8: Exercise Planning

Competencies addressed by this activity:

02.	**Analyze Nutrition, Health, and Wellness Practices Across the Life Span**
02.01	Examine the Benefits of Good Nutrition on Personal Health and Well Being
02.03	Analyze the Relationship Between Nutrition and Health

Activity: 8

EXERCISE PLANNING

Name_____ **Class**_____

Being physically fit does not necessarily mean having large muscles and physical strength, but having a healthy heart and lungs. Everyone should be actively concerned with his/her physical health. Exercise is an important part of being healthy. Some ideas to help you be physically fit are:

1. Be sure you are fit enough to exercise. If you are ill or have questions about exercising, talk to a doctor.
2. Start your fitness program slowly; increasing the amount of exercise a little each day.
3. Keep it up! Even a little exercise each day helps reduce stress and makes you feel more energetic.
4. Before you begin heavy exercise, warm-up. When you are finished, cool-down by doing some low impact exercises.
5. Make exercising more fun by listening to music or watching a video.
6. Limit the number of times you weigh yourself. Your weight depends on a number of factors, including time of day, whether you have just eaten, etc.
7. Find activities you really enjoy doing so that exercising becomes fun.
8. Identify your goals before you begin to exercise and make them realistic.
9. Work with a partner to keep yourself motivated.

In the space below, write an exercise plan that could help you maintain good physical health. Include the following information: the type of exercises you will do, how often will you do them, and how long you will do them. Make a chart and record your successes for two weeks. Then give your chart to your teacher. (A completed chart is worth 20 points)

Student Signature _____

Parent Signature _____

Activity 9: Supplements for Muscle Gain

Competencies addressed by this activity:

02.	**Analyze Nutrition, Health, and Wellness Practices Across the Life Span**
02.01	Examine the Benefits of Good Nutrition on Personal Health and Well Being
02.02	Evaluate the Nutrient Needs and Sources for Individuals and Families
02.03	Analyze the Relationship Between Nutrition and Health
02.04	Analyze Health Concerns and Considerations in Relation to Nutrition Practices

Activity: 9

Supplements for Muscle Gain

Situation:

Matt, a varsity basketball center, walks into a mall nutrition store and tells the clerk he wants more muscle but not necessarily a lot of weight gain. The clerk sells him $50 worth of amino acids (1 jar) and $50 of other supplements. The varsity basketball player goes to summer camp with the supplements.

What happened to Matt?

Matt felt he gained muscle mass. Why? Matt is growing. His basketball camp provided intense training. Matt's male hormones promote natural muscle growth. Both the intense training and normal growth would result in increased muscle mass without taking any supplements.

Why do athletes continue to take supplements, like amino acids, when they don't achieve results?

Look over these facts and decide for yourself.

Amino acid claims:
Increase release of human growth hormone
Promote muscle growth
Increase strength

Amino acid facts:
Weight lifting and endurance training increase growth hormone levels, ***amino acids don't.****
Combining amino acid supplements with exercise does not increase growth hormone levels above those achieved with exercise.
*Reference: *Lambert, M.I., et al. Failure of commercial oral amino acid supplements to increase serum growth hormone concentrations in male body builders*. Int. J. Sports Nutr. 3:290-297, 1993.

AMINO ACID SUPPLEMENT CONTENT:	***COMPARE TO ONE OUNCE OF MEAT:***
200-500 milligrams of amino acids per tablet	7000 milligrams of amino acid per ounce

Supplements without scientific support:

Athletes take supplements to give themselves an edge over the competition. An effective supplement should improve athletic performance over the usual level. The following is a list of popular ergogenic aids, or "performance enhancers" which have **not** been proven to be effective. *Our thanks to Ellen Coleman,* RD, MA, MPH, *Sports Nutritionist, for providing the information for this section.*

What's NOT proven to improve performances:

Amino acids
Boron
Carnitine
Choline
Chromium
Coenzyme
DHEA
Gamma-Oryzanol
Ginseng
Glandulars (extracts from testes, pituitary or adrenals)
Inosine
Medium-Chain Triglycerides (MCT oil)
Omega 3 Fatty Acids
Similax
Vitamin B-12
Yohimbine

Activity 10: Aerobic Exercise

Competencies addressed by this activity:

02.	**Analyze Nutrition, Health, and Wellness Practices Across the Life Span**
02.01	Examine the Benefits of Good Nutrition on Personal Health and Well Being
02.03	Analyze the Relationship Between Nutrition and Health
02.04	Analyze Health Concerns and Considerations in Relation to Nutrition Practices

Activity: 10

Aerobic Exercise

Name_____Class_____

Aerobic exercise involves large muscle activity of the arms and legs. Many experts recommend using about 300 calories per day in some aerobic exercise. Complete the following chart dealing with aerobic exercise to see how long it would take to use 300 calories. 2 points for each answer.

ACTIVITY	CALORIES USED PER MINUTE	ACTIVITY	CALORIES USE PER MINUTE
Jogging	10.6	Canoeing	3.1
Golfing	5.7	Mountain Climbing	10.2
Basketball	8.6	Ping Pong	4.9
Volleyball	3.5	Tennis	7.1
Swimming, easy	5.2	Touch Football	10.1
Cross Country Skiing	15.3	Walking 2 mph	3.2
		Walking 4 mph	5.8

ACTIVITY	HOURS AND MINUTES USED TO BURN 300 CALORIES
1. Basketball	
2. Cross Country Skiing	
3. Jogging	
4. Mountain Climbing	
5. Ping Pong	
6. Swimming, easy	
7. Tennis	
8. Touch Football	
9. Volleyball	

10. Walking, 1mph

Aerobic Exercise—Key

	ACTIVITY	HOURS AND MINUTES USED TO BURN 300 CALORIES
1.	Basketball	34 minutes
2.	Cross Country Skiing	19 minutes
3.	Jogging	28 minutes
4.	Mountain Climbing	29 minutes
5.	Ping-Pong	1 hour 1 minute
6.	Swimming, easy	57 minutes
7.	Tennis	42 minutes
8.	Touch Football	29 minutes
9.	Volleyball	1 hour 25 minutes
10.	Walking, 1 mph	1 hour 33 minutes

Activity 11: Snack Wise

Competencies addressed by this activity:

02.	**Analyze Nutrition, Health, and Wellness Practices Across the Life Span**
02.02	Evaluate the Nutrient Needs and Sources for Individuals and Families
02.03	Analyze the Relationship Between Nutrition and Health
02.06	Demonstrate a Daily Food Intake Plan
04.	**Demonstrate the Management of Food for Individuals and Families**
04.05	Demonstrate Meal Planning Issues and Techniques
05.	**Demonstrate the Preparation of Nutritious Foods for Individuals and Families**
05.06	Prepare and Evaluate a Variety of Nutritious Food Combinations

Activity: 11

Snack Wise

The eating habits of Americans are changing with people on the go more than ever. Many people eat at least one meal, sometimes more, away from home each day. Few families eat three regular meals a day any more. Because of these changes, snacking has become more and more a part of our lifestyles. Some experts say that 25% of all the food teenagers eat are snack foods.

Snacking can be either good or bad depending on the foods that are chosen. Empty calorie foods like candy, pop and cookies can make you feel full, but do not provide your body with the nutrients it needs to perform well. Foods like fruit, milk, sandwiches or yogurt can give your body needed nutrients as well as taste good.

Foods that are good for you do not have to taste bad or be boring. The best way to be a wise snacker is to plan ahead. Think of some nutritious foods that you like, and have them available. When you are hungry, it's difficult to make a wise food choice. Chances are that you will probably want to eat the first thing you find, which may be sweet and high in calories.

There are many nutritious snack foods that can be purchased at the grocery store. The best way to tell if a food is nutritious is to read the label. If there are several important nutrients (vitamins, minerals, etc.) listed with a good percentage of the daily requirements and fairly few calories, fat, and cholesterol, you might choose this as a snack. If the food doesn't have a label, think about what it is made from. If the main ingredients consist of sugar or fat, it probably is not a good choice. Remember that foods high in sugar are not always listed as "sugar". They include brown sugar, corn syrup, and any food that ends in "ose"—like dextrose, sucrose, and fructose.

If your weight is normal for your age and height, you probably don't need to worry about counting calories or dieting. Teenagers are growing quickly and are usually very active. You do need to worry about eating a lot of empty calories—foods that have a lot of sugar or fat and not many nutrients. The habits you are beginning now will stay with you as you get older and your metabolism slows down. Chances are, you probably will not be as active. This may mean that as you grow older, you will put on extra weight if you form the habit of eating a lot of empty calories now without exercise. Skipping breakfast and then grabbing a candy bar or doughnut means you are missing the nutrients your body needs to start the day out right.

Remember that you need four servings from the milk group each day to get the calcium needed for developing healthy bones and teeth. Getting enough servings from the fruit and vegetables group seems to be a problem for many people, not just teenagers. Nutritionists are now beginning to recommend

that we eat six serving from this group daily, instead of four as in the past

SUMMARY QUESTIONS:

1. What is the best way to tell if a food is nutritious?
   READ THE LABEL

2. How many servings from the dairy group do you need each day?
   AT LEAST FOUR

3. The best way to be a good snacker is to ____PLAN_____ _____ AHEAD_____.

Snack Wise Activity

Name_____Hour_____

After discussing the importance of nutritious snacking, answer the following questions on the back of this paper.

1. What is the best way to tell if a food is nutritious?
2. What word ending means the same thing as sugar?
3. What are empty calorie foods?
4. How many servings do teenagers need from the dairy group daily?
5. What food groups are low in calories and high in nutrients?

DIRECTIONS: List 15 snacks that contain less than 150 calories and have 2 grams of fat or less. Be sure to give a list of serving sizes, calories, and grams of fat. Use the food comparison cards to help you. Start with the five snack items that you enjoy the most, and put stars (*) by each.

SNACK	SERVING SIZE	FATS (GRAMS)	CALORIES
1. EX. Apple	1	1	110
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

10.			
11.			
12.			
13.			
14.			
15.			

Snack Wise —Key

1. What is the best way to tell if a food is nutritious?
   READ THE LABEL

2. What is a word ending that means the same thing as sugar?
   "-OSE"

3. What are empty calorie foods?
   FOODS WITH LOTS OF CALORIES AND FEW NUTRIENTS—CANDY, POP, COOKIES

4. How many servings do teenagers need from the dairy group daily?
   FOUR

5. What food groups are low in calories and high in nutrients?
   FRUITS AND VEGETABLES

Activity 12: How to Identify Weight Loss Fraud

Competencies addressed by this area:

02.	**Analyze Nutrition, Health, and Wellness Practices Across the Life Span**
02.02	Evaluate the Nutrient Needs and Sources for Individuals and Families
02.04	Analyze Health Concerns and Considerations in Relation to Nutrition Practices
02.06	Demonstrate a Daily Food Intake Plan
04.	**Demonstrate the Management of Food for Individuals and Families**
04.07	Evaluate the Impact of Sciences and Technology on Food Composition, Safety, and Other Issues

Activity: 12

How to Identify Weight Loss Fraud

"The voice of the quack is seductive,
secretive and soothing
--it's a friendly, manipulative voice
that saps money and health
from its victims."

What's wrong with fraud?

Weight loss fraud now floods the Internet and other media. It causes numerous injuries and deaths every year; it fosters cultism, fear and distrust; it destroys, deceives and manipulates. Con artists specializing in weight loss fraud target and exploit the most vulnerable among us, often children, teens and low income consumers.

Unfortunately, there's a great deal of complacency about fraud. Many professionals shrug it off as not their concern. Consumers seldom complain. Regulatory agencies plead budget constraints and more pressing problems. But we can no longer afford to be complacent about the current upsurge in fraud and quackery in the health field.

Weight loss fraud is harmful in these five ways:

1. **Increases health risk**. Weight loss fraud, quackery and fads cause many injuries, severe reactions and deaths each year in the U.S. Misplaced belief in quackery also prevents people from seeking adequate medical care.
2. **Increases in financial costs**. Modern con artists use an array of high-tech methods to swindle their victims. They cheat those who can least afford to pay for their worthless products or join their manipulative pyramid schemes. They bilk Americans of an estimated $10-40 billion in weight loss fraud alone each year.
3. **Increases emotional risk**. Repeated attempts to lose weight, followed by the inevitable regain, bring some shame and a sense of failure and powerlessness to the consumer. This batters self-esteem and can be psychologically damaging.
4. **Promote paranoia**. Quackery advertising plays on fears. It fosters delusion, cultism, fanaticism, paranoia, extremism, alienation, pseudoscience and distrust of the medical community. It corrupts truth and reason.
5. **Interferes with responsible programs**. With their magical solutions and outrageous promises, con artists foster impossible expectations and undermine weight management and wellness programs.

What can you do?

You can make a difference by combating fraud and exploitation with truth. It does matter that children, teens and adults develop healthy attitudes and learn to eat, move and live in healthy ways. We urge you to confront health fraud wherever you find it, and to help your family, friends, associates, patients, and clients understand the vast difference between science and pseudoscience. You can reduce the fraud by exposing worthless diet and food supplement products, reporting scams, registering complaints, urging action by appropriate agencies, and encouraging those you work with to do the same.

Guidelines for Fraud Identification

Fraudulent weight loss products and programs often rely on unscrupulous but persuasive combinations of message, program, ingredients, mystique, and delivery system. A weight loss product or program may be fraudulent if it does one or more of the following:

Message

1. Claims or implies a large, fast weight loss – often promised as easy, effortless, guaranteed or permanent. (Weight loss should not exceed an average of one pound per week).
2. Implies weight can be lost without restricting calories or exercising, and discounts the benefits of exercise.
3. Uses typical quackery terms such as: miraculous, breakthrough, exclusive, secret, ancient, from the Orient, accidental discovery, doctor developed.
4. Claims to get rid of "cellulite". (Cellulite does not exist and reference to it is a red flag warning of fraud or misinformation).
5. Relies heavily on undocumented case histories, before and after photos, and testimonials by "satisfied customers" (who are often paid for the testimony as written by the promoter). Weight loss claims should be typical of all clients, or include a disclaimer.
6. Misuses medical or technical terms, refers to studies without giving complete references, claims government approval.
7. Professes to be a treatment for a wide range of ailments and nutritional deficiencies as well as for weight loss.
8. Makes claims which are not stated on the product label.

Program

9. Promotes a medically unsupervised diet of less than 1000 calories a day.
10. Diagnoses nutrient deficiencies, as with computer-scored questionnaire, and prescribes vitamins and supplements (rather than a balanced diet). Recommends these in excess of 100% of Recommended Daily Allowances.
11. Promotes aids and gadgets such as body wraps, sauna belts, electric stimulators, passive motion tables, aromatherapy, appetite patches, earrings, acupressure devices or acupuncture.
12. Promotes a nutritional plan without at least one author or counselor who has reliable nutritional credentials. (Nutrition educators and registered dieticians are preferred).
13. Fails to state risks or recommend a medical exam.

Ingredients

14. Uses unproven, bogus or potentially dangerous ingredients such as spirulina, glucomannan, human chorionic gonadotropin (HCG), Echinacea root, bee pollen, fennel, chickweed, starch blockers, or chromium picolinate.
15. It is illegal to make a drug claim not allowed by the Food and Drug Administration for any ingredient, food supplement, or nonprescription drug. A drug claim is any claim that the product will alter body processes, such as suppress the appetite, speed up the metabolism, or block digestion. The only allowed drug claim is appetite suppression – for phenylpropanolamine (PPA) and benzocaine only.
16. Claims ingredients will surround calories, starch, carbohydrate or fat and remove them from the body are illegal drug claims.

Mystique

17. Encourages reliance on a guru figure who has the ultimate answers or secrets unknown by others.
18. Grants mystical properties to certain foods or ingredients
19. Bases plan on faddish ideas, such as food allergies, forbidden foods or magic combinations of foods.
20. Declares that the established medical community is against this discovery and refuses to accept its miraculous benefits.

Methods of delivery

21. Is sold by self-proclaimed health advisors or "nutritionists", often door-to-door, in health food stores, or chiropractor offices.
22. Distributed through hard-sell mail order advertisements, television infomercials, or ads which list an 800 number without address indicating possible Postal Service action against the company.
23. Demands large advance payments or long-term contracts. Payment should be pay-as-you-go, or refundable. (May display prominent money-back guarantee, but a common complaint against these companies is that they do not honor their own guarantee).

24. Uses high pressure sales tactics, one-time-only deals, or recruitment for a pyramid sales organization.

Questionable Weight Loss Products

The following weight loss products and programs are commonly sold and advertised in false, misleading and illegal ways:

1. **Diet pills**
   Herbal and "natural" diet products sold as food supplements; anti-cellulite pills, bee pollen, starch, fat or sugar blockers, fiber pills, ephedrine or ma huang, chromium picolinate

2. **Creams and aids**
   Cellulite creams and lotions, thigh cream, appetite patches, appetite spray, fiber cookies, herbal slimming teas, mushroom tea, hypnosis.

3. **Gadgets**
   Continuous passive motion tables, body stimulation devices, buzzing belts, vacuum pants, body wraps, heat devices to 'melt fat', toners.

4. **Themes and combos**
   The products listed above are sometimes combined into costly programs involving herbal pills, cellulite creams, body wraps, the quack concept of detoxifying the body, and liberal doses of mystique to overwhelm the vulnerable client.[1]

FDA MedWatch
5600 Fishers Lane, HF-2, Rm. 9-57
Rockville, MD 20857
Telephone: 1-800-332-1088
Fax: 1-800-332-0178

How to Report Fraud

If you've been scammed, or know someone who has, or you want to report a suspected fraud, the first place to go is usually the consumer protection department of your own state attorney general's office. Some states have more active consumer agencies than others, but all need to be encouraged, and all need more consumer complaints. To make a stronger impact, repeat your complaints to federal agencies.

Contact the agencies below:

- For help in getting reimbursement or redress for wrong doings
- To file a complaint or report suspected fraud
- To report injury (MedWatch for health providers)
- To get information on products
- To ask how to proceed with a complaint

Your state consumer protection department. The state attorney general has authority under most state consumer protection statutes to investigate and prosecute unfair or deceptive acts and practices. Many have the power to seek consumer restitution, civil fines, and revocation of a company's authority to do business.
Contact:

Department of Consumer Protection
Idaho State Attorney General's Office
Boise, Idaho 83607

U.S. Federal Trade Commission. The FTC regulates advertising and marketing of foods, non-prescription drugs, medical devices, and health care services. FTC can seek federal court injunctions to halt fraudulent claims and obtain redress for injured customers. Contact:

Federal Trade Commission
Correspondence Branch
6th and Pennsylvania Ave., NW
Washington, DC 20580
Tel: 202-326-2222 Web site: www.ftc.gov

Activity 13: The Dietary Guidelines

Competencies addressed by this activity:

02.	**Analyze Nutrition, Health, and Wellness Practices Across the Life Span**
02.02	Evaluate the Nutrient Needs and Sources for Individuals and Families
02.04	Analyze Health Concerns and Considerations in Relation to Nutrition Practices
02.06	Demonstrate a Daily Food Intake Plan

Activity: 13

The Dietary Guidelines

The following information will help you become acquainted with the dietary guidelines:

1. **EAT A VARIETY OF FOODS**: How many of you have tasted an unusual food? (Have students share as many ideas as they can.) Each food we eat contains nutrients that help our bodies work well. There are over 40-50 nutrients our bodies need. No single food contains all of these nutrients. That is why we must eat a wide variety of foods. (You may wish to show the food comparison cards to illustrate how foods usually contain only one or two nutrients needed by the body.)

2. **MAINTAIN HEALTHY WEIGHT**: The weight guidelines for students your age cannot clearly be defined. Your bodies are still growing and developing and there is no ideal weight. The most helpful thing you can do is NOT worry about your weight, but to eat healthy food by following the other guidelines.

   Hand each student a caramel. Let them guess how long it would take to burn off the calories by doing the following activities:

Play basketball	7 minutes
Play cards	1 hour
Swim	6 minutes
Walk	16 minutes

   Remember, this is to burn off the calories from ONE caramel, not a handful.

   What is a calorie?

   A calorie is a measurement of energy available in foods. Each exercise we do requires energy. Everything we eat provides energy. A food that is advertised as pure energy is probably pure calories.

   It takes 3,500 calories to make one pound of fat. Calories are found in the fats and carbohydrates that we eat. There are twice as many calories in a gram of fat as a gram of carbohydrate. Proteins also contain calories, but are not usually used by the body for energy, unless other sources are not available. In order to gain on e pound of body fat, 3,500 calories in excess of daily needs must be eaten. To lose one pound of body fat, 3,500 calories must be used.

One-half of the calories in our diets should come from complex carbohydrates. These include foods like potatoes, bananas, pasta and whole grain breads. Complex carbohydrates are necessary for making our bodies work. Our brain requires about 24% of the calories we need. It uses only carbohydrate calories, not fat calories. Carbohydrate calories are the most efficient source of energy for movement.

Simple carbohydrates provide little more than calories to the body. These include foods like doughnuts, candy and soda pop. They are called empty calories because they contain very few nutrients.

Eliminating carbohydrates from the diet can be very dangerous and can make a person ill. After a few days without carbohydrates, the body reacts by feeling tired, getting a headache or having nausea.

Oftentimes, it is not the food we eat that adds calories, but the way the food is prepared. Butter, margarine, cream, sour cream, shortening and oil add hundreds of calories. One tablespoon of margarine or salad dressing contains about 100 calories.

Nutritionists believe we should get 50-60% of our daily calories from complex carbohydrates, 30-40% from protein and not more than 30% from fats.

3. **CHOOSE A DIET LOW IN FAT, SATURATED FAT, AND CHOLESTEROL**: An important concept that needs to be understood is that the word diet does not automatically means a weight loss diet. A DIET IS WHAT YOU EAT! Most Americans eat too much fat. The average intake is 50% of the diet coming from fats. For optimal health, our fat intake should average 30% or lower. What are some fats we commonly eat? (List the fats on the board as the students name them.)

   There are different types of fat. The most harmful fats come from animals; they are known as saturated fats. At room temperature, these fats usually remain solid (margarine, shortening, etc.) Although coconut, palm kernel, and palm oils are not from animals, they are considered to be saturated fats.

   Another type of fat is cholesterol. Cholesterol comes from animal products ONLY! The body does not need to take in cholesterol; it manufactures the amount it needs. Too much cholesterol in the body can clog blood vessels and may lead to heart disease. You can see that cutting out animal fats will reduce the saturated fats and cholesterol in your diet.

   All fats contain 9 calories per gram.

To limit fat in your diet:

1. Avoid fried foods.
2. Season with herbs and spices rather than sauces with butter or margarine.
3. Replace whole milk with skim milk.
4. Choose lean cuts of meat (trim off fat.)
5. Remove skin from poultry.
6. Eat a moderate amount of eggs.
7. Read labels to avoid hidden fats.

4. **CHOOSE A DIET WITH PLENTY OF VEGETABLES, FRUITS, AND GRAIN PRODUCTS**: This guideline suggests that many vegetables, fruits and grains should be eaten because they contain complex carbohydrates and fiber. Complex carbohydrates are found in breads, cereals, pasta, rice, dry beans and peas, and other vegetables, such as potatoes and corn.

   As well as energy, starch foods also provide many vitamins and minerals. They do not provide many calories; it is usually the butter, jelly and cream sauces that are added to the starchy foods that increase the calories. Starches provide only 4 calories per gram. Fat provides 9 calories per gram.

   Sugars, such as table sugar, honey and corn syrup are simple carbohydrates.

   Fiber is important to the body because it helps in the digestive process.

FOODS WITH STARCH	FOODS WITH FIBER
Breads	Whole Grain Breads
Breakfast Cereals	Whole Grain Breakfast Cereals
Pasta	Whole Grain Pasta
Rice	Vegetables
Dry Beans and Peas	Dry Beans and Peas
Potatoes, Corn, Peas	Whole Fruits
Lima Beans	Nuts and Seeds

5. **USE SUGARS ONLY IN MODERATION**: Show pictures (or containers) of the following foods: bread, ketchup, Vienna sausages, tomato soup, wheat snack crackers, Cheerios, candy bars, salad dressing, and pickles. Ask the students which products contain sugar. (All of these foods contain sugar.) We eat more sugar than we realize.

   Sugars supply energy, or calories, but supply few nutrients. If you eat so much sugary food that

you are not hungry enough to eat nutritious foods, you will be lacking in essential vitamins and minerals. Currently we eat about 130 pounds of sugar each year. That is about 500 calories per person each day.

One of the major problems related to eating too much sugar is tooth decay. Sticky and chewy foods that stay on the teeth can cause problems. Sugary foods eaten between meals are more likely to cause tooth decay than those eaten only at mealtime.

DEMONSTRATE to students how much table sugar must be added to shredded wheat or puffed wheat to make them equal to the amount of sugar in pre-sweetened cereal. Many contain about 50% sugar. If you have a ½ cup of cereal, you would add ½ cup sugar to equal the amount of the pre-sweetened cereal. Add the sugar teaspoonful by teaspoonful so that students can visualize this amount.

TO LIMIT SUGARS:

1. Read ingredients labels. Check for hidden sugars.
2. Buy fresh fruits or fruits packed in water or juice rather than syrup.
3. Buy fewer foods that are high in sugar.
4. Reduce the amount of sugar you use in recipes at home. Start by reducing sugar gradually
   and then continue until you reach a 1/3 reduction.
5. Eat fresh fruits and cheeses for dessert instead of sugary foods.
6. Reduce on the amount of soft drinks you consume.

6. **USE SALT AND SODIUM ONLY IN MODERATION**: Sodium is a mineral that occurs naturally in some foods and is added to many foods and beverages. Most of the sodium in the American diet comes from table salt. Everyone needs some salt in their diet, but only a small amount.

People are not born with a desire to salt their food. Liking salty food is something that has been learned. Therefore, you can relearn to like excess salt by gradually lowering the amount of salt in the foods you eat.

There are many forms of salt: sodium, salt, soy sauce, seasoned salts, monosodium glutamate and sodium citrate.

Some foods that contain hidden salt are: canned and frozen vegetables, smoked and cured meats, pickles, sauerkraut, cheeses, sauces, soups, salad dressings, breakfast cereals.

7. **IF YOU DRINK ALCOHOLIC BEVERAGES, DO SO IN MODERATION**: Alcoholic beverages supply calories but very few nutrients. A major problem is that alcoholic beverages can become addicting. However, another primary reason you should not drink is because it is illegal for individuals under the age of 21. There are many health risks associated with drinking alcoholic beverages. Many coolers contain more alcohol than beer and other drinks containing alcohol.

SUMMARY QUESTIONS:

1. What is the suffix that means the food is a sugar?
   OSE

2. What is the disease associated with eating too much sugar?
   DENTAL CARIES (CAVITIES)

3. What problem can lead to heart attack, stroke and diabetes?
   BEING OVERWEIGHT

4. How many calories are in a gram of fat?
   9

5. What kinds of foods contain cholesterol?
   ANIMAL PRODUCTS

6. What two substances are associated with heart disease?
   SATURATED FATS AND CHOLESTEROL

7. Give two examples of simple carbohydrates:
   TABLE SUGAR, HONEY, CORN, SYRUP, CANDY, GUM, and FROSTING

8. How many calories are there in a gram of carbohydrates?
   4.5

Activity 14: Dietary Guidelines for the Family

Competencies addressed by this activity:

02.	**Analyze Nutrition, Health, and Wellness Practices Across the Life Span**
02.02	Evaluate the Nutrient Needs and Sources for Individuals and Families
02.04	Analyze Health Concerns and Considerations in Relation to Nutrition Practices
02.05	Evaluate Nutritional Needs for Individuals Throughout the Life Cycle
02.06	Demonstrate a Daily Food Intake Plan

Activity: 14

Dietary Guidelines for the Family

Name_____Class_____

Share the dietary guidelines with your family. (6 points)

a. EAT A VARIETY OF FOODS
b. MAINTAIN HEALTHY WEIGHT
c. CHOOSE A DIET LOW IN FAT, SATURATED FAT, AND CHOLESTEROL
d. CHOOSE A DIET WITH PLENTY OF VEGETABLES, FRUITS, AND GRAIN PRODUCTS
e. USE SUGARS ONLY IN MODERATIONS
f. USE SALT AND SODIUM ONLY IN MODERATION
g. IF YOU DRINK ALCOHOLIC BEVERAGES, DO SO IN MODERATION

Have family members answer the following questions? (2 points each)

1. What do the adults think of these guidelines?

2. What do the children think of these guidelines?

3. Which guideline is most difficult for your family to follow?

4. What could your family do to follow this guideline more closely? (10 points) Identify specific steps you will follow and record your progress for one week.

STEPS TO IMPROVEMENT:

1.
2.
3.
4.

Make a chart to record your progress for two weeks. When the chart is complete, give it to the teacher.

Student Signature_____

Parent Signature_____

Activity 15: Dietary Guidelines Recipes

Competencies addressed by this activity:

02.	**Analyze Nutrition, Health, and Wellness Practices Across the Life Span**
02.02	Evaluate the Nutrient Needs and Sources for Individuals and Families
02.06	Demonstrate a Daily Food Intake Plan
04.	**Demonstrate the Management of Food for Individuals and Families**
04.05	Demonstrate Meal Planning Issues and Techniques

Activity:	**15**

Dietary Guideline Recipes

Name_____Class_____

Compile and create a recipe book which follows the dietary guidelines. At the top of each recipe, identify which guideline you feel the recipe follows. You will be given one point per recipe.

Activity 16: Nutritious Meal lab Experience Ramen Noodle Stir Fry

Competencies addressed by this activity:

02.	**Analyze Nutrition, Health, and Wellness Practices Across the Life Span**
02.06	Demonstrate a Daily Food Intake Plan
03.	**Employ Food Laboratory Management Techniques**
03.02	Practice Laboratory Safety and Sanitation Techniques
04.	**Demonstrate the Management of Food for Individuals and Families**
04.03	Practice Food Safety and Sanitation Techniques
04.05	Demonstrate Meal Planning Issues and Techniques
05.	**Demonstrate the Preparation of Nutritious Foods for Individuals and Families**
05.01	Demonstrate Basic Food Preparation Skills
05.02	Explore and Prepare Nutritious Meals Using Fruits and Vegetables
05.05	Explore and Prepare Nutritious Foods Using Breads, Cereal, Rice, and Pasta

Activity: 16

Nutritious Meal Lab Experience
Ramen Noodle Stir Fry

Names_____

Ingredients:

1 C. chopped broccoli
1 C. chopped cauliflower
1 carrot, sliced thin
2 pkgs. chicken flavored Ramen Noodles (with seasoning packets)
Nonstick vegetable spray
2-3 T. Soy sauce (optional)
1 2/3 C. water

Directions:

1. Wash broccoli and cauliflower. Cut into small, bite-size pieces.
2. Peel and slice carrot into thin strips.
3. Before opening the ramen packets, crush packet and break up the noodles. Pour noodles into a bowl and set aside.
4. Spray frying pan with nonstick vegetable spray.
5. Place frying pan on burner with medium heat for 30 seconds. Add vegetables to pan.
6. Stir fry vegetables (with a wooden spoon) for about one (1) minute.
7. Stir in the broken noodles, contents of the seasoning packets, and the water.
8. Bring mixture to a boil. Lower heat to medium-low and simmer with the lid on for 3-5 minutes, or until most of the liquid has been absorbed. Stir twice during cooking.
9. Serve. Add soy sauce if desired. Make 4-6 servings.

Before you begin, turn this paper over and complete the planning sheet. Assign at least one preparation duty and one cleanup duty to each member of your group. Put the name of the student who is responsible for each task on the line in front of that task.

When you have completed your lab work as outlined on the back of this paper, fill in this section for evaluation.

GRADING: (10=Excellent, 1=Needs Improvement)	Student Rating	Teacher Rating
Lab area is clean	_____	_____
Directions were followed	_____	_____
Lab was completed on time	_____	_____
Overall rating of product	_____	_____
Group members worked well together	_____	_____
TOTAL	_____	_____

Lab Planning Sheet: "Ramen Noodle Stir Fry" – Page 2

_____ 1. Get the supplies from the supply table.

_____ 2. Wash broccoli and cauliflower. Cut into small bite-size pieces. Measure 1 cup of broccoli and 1 cup of cauliflower.

_____ 3. Peel carrot and slice into thin strips.

_____ 4. Before opening the ramen packet, crush packet and break up the noodles. Pour noodles into a bowl and set aside.

_____ 5. Spray frying pan with nonstick vegetable spray.

_____ 6. Place frying pan on burner with medium heat for 30 seconds. Pour vegetables into frying pan.

_____ 7. Stir-fry the vegetables (with wooden spoon) for about one (1) minute.

_____ 8. Add the broken noodles, contents of the seasoning packet, and water. Stir until mixed.

_____ 9. Bring mixture to a boil. Lower heat to medium-low; simmer with the lid on for 3-5 minutes or until noodles are soft and most of the liquid has been absorbed. Stir twice during cooking.

_____ 10. Fill one sink with hot, soapy water and the other sink with hot rinse water. Set the dish drain net to the edge of the rinse sink.

EVERYBODY!	11.	Serve your stir-fry to everyone in your unit. Sit together at your table and enjoy the food! Let the teacher see your finished food product.
_____	12.	Wash the dishes in hot, soapy water. Rinse them in the hot water and place in the dish drainer.
_____	13.	Dry the dishes and put away in their correct places.
_____	14.	Wash and dry the frying pan. Dry dish drainer and put away.
_____	15.	Empty your dishwater and rinse water.
_____	16.	Wipe the range, table, and counter tops. Dry the sinks and polish the faucets with the dishtowel.
_____	17.	Put the dirty linens in the laundry area.
_____	18.	Sweep the floor or vacuum the carpet.
EVERYBODY!	19.	Put your aprons away!

Nutrition Evaluation of Stir Fry

Name_____ Class_____Score_____

1. Which food groups on the pyramid are included in this recipe?

    1. *Fats, oils, sweets*
    2. *Dairy products*
    3. *Meat*
    4. *Green and leafy vegetables*
    5. *Fruit*
    6. *Bread, pasta, and cereal*

2. Which dietary guidelines are followed in this recipe?

    1. *Eat a variety of foods*
    2. *Maintain a healthy weight*
    3. *Choose a diet low in fat, saturated fat, and cholesterol*
    4. *Choose a diet with plenty of vegetables, fruits, and grain products*
    5. *Use sugars only in moderation*
    6. *Use salt and sodium only in moderation*
    7. *Teenagers should avoid using alcoholic beverages*

3. Which of the six basic nutrients can be found in this recipe?

    1. *Fats*
    2. *Proteins*
    3. *Minerals*
    4. *Vitamins*
    5. *Carbohydrates*
    6. *Water*

4. On a scale of 1 to 10 (ten being the healthiest), how healthy would you rate this meal to be?_____

A QUICK PLAN FOR EVALUATING YOUR DIET

1. Write down everything you eat
2. Determine the fat grams in the food you are eating and compare the number with what you need
3. Determine how many servings from each of the food groups you ate
4. Decide what changes can be made to improve your diet

Activity 17: Pyramid Pizzazz!!

Competencies addressed by this activity:

02.	**Analyze Nutrition, Health, and Wellness Practices Across the Life Span**
02.01	Examine the Benefits of Good Nutrition on Personal Health and Well Being
02.02	Evaluate the Nutrient Needs and Sources for Individuals and Families
02.03	Analyze the Relationship Between Nutrition and Health
02.06	Demonstrate a Daily Food Intake Plan

Activity: 17

Pyramid Pizzazz!!

Name_____Class_____

DIRECTIONS

Keep track of what you eat for three (3) days. Choose items from all of the food groups every day. Tally your results below to determine your average number of servings.

DAY 1	**DAY 2**	**DAY 3**
Breakfast_____	Breakfast_____	Breakfast_____
_____	_____	_____
_____	_____	_____
Lunch_____	Lunch_____	Lunch_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
Dinner_____	Dinner_____	Dinner_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
Snacks_____	Snacks_____	Snacks_____
_____	_____	_____
_____	_____	_____

Shade in the box for each serving you eat. The boxes indicate how many servings are recommended. Draw in extra boxes for extra servings you eat in a category.

Fats / Oils / Sweets
(Use sparingly)

Day 1 “ “ My
Day 2 “ “ Daily
Day 3 “ “ Average_____

Fruit
(2 – 4 Servings)

Day 1 “ “ “ “ My
Day 2 “ “ “ “ Daily
Day 3 “ “ “ “ Average_____

Meat / Dry Beans / Eggs / Nuts
(2 – 3 Servings)

Day 1 “ “ “ My
Day 2 “ “ “ Daily
Day 3 “ “ “ Average_____

Vegetables
(3 – 5 Servings)

Day 1 “ “ “ “ “ My
Day 2 “ “ “ “ “ Daily
Day 3 “ “ “ “ “ Average_____

Milk / Yogurt / Cheese
(2 – 4 Servings)

Day 1 “ “ “ “ My
Day 2 “ “ “ “ Daily
Day 3 “ “ “ “ Average_____

Cereal / Pasta / Bread / Rice / Potatoes
(6 – 11 Servings)

Day 1 “ “ “ “ “ “ “ “ “ “ “ My
Day 2 “ “ “ “ “ “ “ “ “ “ “ Daily
Day 3 “ “ “ “ “ “ “ “ “ “ “ Average_____

Activity 18: Nutrition Update: Truth or Baloney

Competencies addressed by this activity:

02.	**Analyze Nutrition, Health, and Wellness Practices Across the Life Span**
02.02	Evaluate the Nutrient Needs and Sources for Individuals and Families
02.04	Analyze Health Concerns and Considerations in Relation to Nutrition Practices

Activity:	**18**

Nutrition Update: Truth or Baloney

DIRECTIONS: Have student answer the following questions as TRUTH OR BALONEY. (Students correct their own papers. Discuss the answers.)

1. Ingredients on food labels are listed in alphabetical order.
2. A medium potato has more calories than a large apple.
3. Taking large doses of Vitamin A is harmless.
4. Carbohydrates are fattening.
5. A kiss uses up 50 calories.
6. Honey is more nutritious than sugar.
7. You need to eat a lot of meat to be a good athlete.
8. Eating chocolate causes acne.
9. Breads are fattening.
10. Taking large does of Vitamin C will keep you from getting a cold.

ANSWERS:

1. BALONEY. Ingredients are listed in order of the percentage of the contents. (Largest percentage first.)

2. TRUTH. Potatoes have 90 calories. Large apples have 15.

3. BALONEY. Vitamin A is a fat-soluble vitamin, which means it is stored in body fats.

4. BALONEY. Carbohydrates are filling. Eating too many carbohydrates can be fattening.

5. BALONEY. An average kiss uses up about 9 calories.

6. BALONEY. Nutritionists say this is wrong. To the human digestive system, honey and most other natural sugars are the same. Honey is a combination of sugars—sucrose, glucose, and sometimes fructose. Honey contains a minuscule amount of nutrients that are refined out of white sugar, but not nearly enough to make a difference.

7. BALONEY. Extra protein will not give a person more strength.

8. BALONEY. Scientific studies have shown that chocolate does not cause acne.

9. BALONEY. Breads are made up of carbohydrates. Any food, eaten in excess, can be fattening.

10. BALONEY. Scientific studies have not proven that taking Vitamin C can prevent one from getting a cold.

Activity 19: Nutrition in the News

Competencies addressed by this activity:

02.	**Analyze Nutrition, Health, and Wellness Practices Across the Life Span**
02.02	Evaluate the Nutrient Needs and Sources for Individuals and Families
02.04	Analyze Health Concerns and Considerations in Relation to Nutrition Practices
02.06	Demonstrate a Daily Food Intake Plan

Activity: 19

NUTRITION IN THE NEWS

Nearly every day, research findings related to nutrition and health make the news. What should you do when today's report seems to contradict what you heard last week? Your best bet is to use caution and common sense.

Additional Resource: Tufts Nutrition Navigator - http://navigator.tufts.edu

TIPS: Use these tips for judging reports of food and nutrition research findings

- Refrain from making changes in your food choices based on results from a single research study.
- The results of one study are just one piece of a bigger puzzle. Wait until more studies can confirm the results.

- Be wary of recommendations that promise a quick fix.
  Claims that sound too good to be true are usually just that.

- Remember to go beyond the headlines.
  Attention-grabbing headlines often oversimplify more complex findings. Bottom-line conclusions are usually reported at the end of a news story.

- Learn about the study methods.
  Longer studies, with more people, are more likely to produce valid results. But be aware that the study results may not apply to you if the people studied are different in age, gender, health, or lifestyle.

- Check out the sources.
  Credible research is conducted by a respectable scientific or medical organization and is reported by a reputable newspaper, newsletter, magazine, or scientific journal.

- Look for expert interpretation.
  Reports of research findings often include reviews and advice from nutrition and healthprofessionals, such as a registered dietitian.

Activity 20: Just Say "NO!" To Dieting

Competencies addressed by this activity:

02.	**Analyze Nutrition, Health, and Wellness Practices Across the Life Span**
02.03	Analyze the Relationship Between Nutrition and Health
02.04	Analyze Health Concerns and Considerations in Relation to Nutrition Practices

Activity: 20

JUST SAY "NO!" TO DIETING

Unless a doctor says that you are dangerously overweight or have a medical problem that requires a special diet, you should *not* diet.

Here's why:

- If you don't get enough calories, you grow at a slower rate and reduce muscle and bone size.
- Going on and off diets upsets your body chemistry. Repeated dieting can actually make you more fat because the weight you regain gets more difficult to lose. Some of the weight you lose is from lean muscle tissue but if you regain weight, most of it will be stored as fat, not as lean tissue.
- When you diet, your body thinks it is being starved, burns calories more slowly and stores up fat. This physical reaction to calorie restriction has evolutionary benefits. In ancient times, when the food supply wasn't constant, it was the people whose bodies had large fat stores who survived.
- Dieting can cause feelings of deprivation and depression that often lead to overeating.
- Diets that eliminate red meat and vegetables may leave you tired, irritable and even anemic. Strict vegetarians are prone to iron-deficiency anemia.
- Failure to lose weight or regaining the weight you just lost, can make you feel even worse about yourself tan before.
- Diets can cause tension between children and parents.
- Overeating may not be the cause of excess weight.
- Very low calorie diets can interfere with menstruation.
- Very low-calorie diets can give you dry skin and dull-looking hair.
- Diets that don't provide adequate nutrients can weaken your immune system, so you are more likely to get sick.
- Restricting calories, even by regularly skipping breakfast, reduces your energy level and keeps you from top mental and physical performance.

Activity 21: Healthy Weight Advertisements

Competencies addressed by this activity:

02.	**Analyze Nutrition, Health, and Wellness Practices Across the Life Span**
02.01	Examine the Benefits of Good Nutrition on Personal Health and Well Being
02.03	Analyze the Relationship Between Nutrition and Health
02.04	Analyze Health Concerns and Considerations in Relation to Nutrition Practices

Activity:	**21**

Healthy Weight Advertisements

DIRECTIONS: Have students create TV commercials, magazine, business, and/or catalog advertisements that show an appreciation for the diversity of body types, shapes, and sizes of men and women.

For example:
Kellogg's Special K cereal launched its "Reshape your Attitude" promotion by assuring women that accepting themselves is a sign of intelligence and it looks beautiful on everyone. TV ads feature men in a bar fussing over their thighs; "Do I look fat in this?", "Do these make my butt look big?". Each commercial contains a size accepting message.

Activity 22: Appliance Groups

Competencies addressed by this activity:

03. Employ Food Laboratory Management Techniques
03.01 Utilize Laboratory Equipment and Work space

Activity:	**22**

APPLIANCE GROUPS

DIRECTIONS: Divide the class into groups. Each group will study and learn about a different kitchen appliance. Each group will prepare a report and demonstrate to the class the proper use, clean up, and safety procedures for their appliance.

- Give students the appliance manual and the appliance itself to help them prepare reports.
- One day is spent preparing the reports and one day is spent reporting to the class.
- Each student must complete the following report on one appliance of his/her choice.

INDIVIDUAL APPLIANCE REPORT

Name Class

1. Name of appliance: (brand and model)

2. List three safety tips for using this appliance.
   A.
   B.
   C.

3. List the steps necessary for operating and assembling. (Demonstrate how to do this)

4. What kinds of foods can be prepared with this appliance.

5. What other appliance could be used in place of this one?

6. List the steps for cleaning this appliance.

7. List three questions that you will ask the class about your appliance.

Activity 23: Equipment BINGO

Competencies addressed by this activity:

03.	**Employ Food Laboratory Management Techniques**
03.01	Utilize Laboratory Equipment and Work space
03.02	Practice Laboratory Safety and Sanitation Techniques

Activity: 23

EQUIPMENT BINGO

DIRECTIONS: You may pass this list out to students or copy it on the board or bulletin board.

From the list below, choose five different kinds of cooking equipment to go under each of the headings on your Equipment Bingo Card. There will be several pieces of equipment that you will not use.

1. Hold up the pieces of equipment the first few times you play this game.
2. Call out the definitions of the equipment—NOT THEIR NAMES. You can play regular Bingo, L shaped, T shaped, frame around the outside, etc. Give lab points for a prize. Several students may win each game.

Example: The cake pan would go under the baking column, which would go under the mixing column.

KEY TO EQUIPMENT BINGO

BAKING	CUTTING	COOKING
Cake pan	Cutting board	Double boiler
Cookie sheet	Kitchen scissors	Saucepan
Bread pan	Paring knife	Pancake turner
Pizza pan	Grater	Tongs
Muffin tin	Apple corer	Wooden spoon
Pie pan	Bread knife	Griddle
Cooling rack	Slicing knife	Skillet
	Biscuit cutter	

MIXING		MEASURING
Rubber scraper	Spatula	
Mixing bowls		Dry measuring cups
Whisk		Liquid measuring cups
Electric mixer		Teaspoon
Potato masher		Tablespoon
Egg beater		Sifter
Pastry blender		Wax paper
Colander		Candy thermometer

NOTE: DO NOT CALL OUT THE NAMES OF THE EQUIPMENT. CALL OUT THE DEFINITIONS. Cut these definitions apart, mix them up and select one at a time.

APPLE CORER--This removes the cores from fruit.

BISCUIT CUTTER—Use this to cut foods into a round shape.

BREAD PAN—This deep, narrow pan is sometimes used to bake fruitcakes. It should have a dull or anodized finish to brown the product. Another name for this is a loaf pan.

CAKE PAN—This may be round, square, rectangular. It usually has straight, deep sides.

CANDY THERMOMETER—Use this to measure the temperature of hot syrup

COLANDER—Use this to strain very coarse foods.

COOLING RACKS—These are usually make of wire and are used to cool baked goods.

COOKIE SHEET—A flat pan with no sides. It's better if it has a shiny finish so the product will not burn.

CUTTING BOARD—Use this to protect the counter when chopping or slicing or for cooling hot dishes.

DOUBLE BOILER—A pan upon a pan. One is filled with water to prevent the other's contents from scorching.

DRY MEASURING CUPS—This set usually has a cup for each measurement. Use it for flour, sugar, and cornmeal.

EGG BEATER—This has a handle you turn to whip icings, eggs , and whipping cream.

ELECTRIC MIXER—It uses kilowatts to mix cakes and cookie batters.

GRATER—This is used for shredding cheese or vegetables.

GRIDDLE—Use this to fry pancakes or sandwiches. It is usually a flat, square pan with no sides.

KITCHEN SCISSORS—This is used to open packages, trim pastry, cut dried fruit or marshmallows.
LIQUID MEASURING CUPS—These are usually make of glass or plastic; they have handles and lips for easy pouring. Always measure at eye level. Use them for measuring milk, water, and syrup.

MIXING BOWLS—These hold ingredients while stirring and combining foods.

MUFFIN TIN—This is used for baking cupcakes, cloverleaf rolls, and muffins. If you do not need each area, add a little water before baking so the pan will not burn.

PANCAKE TURNER—It is a flat, wide slotted tool on a handle. Flip foods such as eggs or grilled cheese sandwiches with this.

PARING KNIFE—A small cutting tool used to remove the skins from vegetables and fruits.

PASTRY BLENDER—This cuts shortening into dry ingredients. In a pinch, two knives will work instead.

PIE PAN—A round pan with slanted sides.

PIZZA PAN—A round pan with no sides used to make an Italian dish.

POTATO MASHER—This is used for mashing bananas, strawberries, or potatoes.

RUBBER SCRAPER—This is a flexible piece of rubber or plastic on a handle. It gets out the last bit of mayonnaise or cake batter.

SAUCEPAN—This is used for cooking foods in liquid.

SIFTER—Use this to add air and remove lumps before measuring flour or other dry ingredients.

SLICING KNIFE—This cuts food into thin, broad pieces.

SPATULA—This has a long, flexible blade and is used to level dry ingredients or frost a cake.

TABLESPOON—A measuring tool that is abbreviated with a capital T or TBSP.

TEASPOON—Three of these equals a tablespoon.

TONGS—This tool opens and closes to pick up foods without piercing them.

WAX PAPER—When sifting and measuring, use this underneath for easy handling and clean up.

WHISK—This is a whip made of wires, used to make sauces and stir foods so they do not get lumpy.

WOODEN SPOON—This tool is made of something that will not conduct electricity. It has a long handle.

Activity 24: Equipment Jeopardy

Competencies addressed by this activity:

03.	**Employ Food Laboratory Management Techniques**
03.01	Utilize Laboratory Equipment and Work space
03.02	Practice Laboratory Safety and Sanitation Techniques

Activity: 24

EQUIPMENT JEOPARDY

DIRECTIONS: Divide the class into two teams. Have a scorekeeper come to the board. You give the answer and let the participants think up the question. Take turns in order. Two points for each correct question.

1. A BOWL SHAPED OBJECT WITH LEGS USED FOR STRAINING VERY COARSE FOODS.
   (What is a colander?)
2. USED FOR LIFTING FOOD OUT OF LIQUIDS.
   (What is a slotted spoon?)
3. LARGER THAN THE EATING VERSION, IT PIERCES MEAT OR VEGETABLES.
   (What is a kitchen fork?)
4. NOT ELECTRIC, USED FOR BEATING AIR INTO EGG WHITES OR REMOVING LUMPS FROM GRAVIES.
   (What is a whisk or whip?)
5. USED AS A PROTECTION FOR HANDS WHILE PICKING UP HOT OBJECTS.
   (What is a hot pad?)
6. USED FOR SERVING SOUPS AND STEWS.
   (What is a ladle?)
7. USED FOR LIFING FOOD OUT OF HOT LIQUID OR TURNING MEAT.
   (What are tongs?)
   PAN UPON A PAN, USED FOR COOKING CUSTARDS AND SAUCES.
   (What is a double boiler?)
8. USED FOR BAKING JELLY ROLLS AND BAR COOKIES.
   (What is a jelly roll pan?)
9. USED FOR COOKING STEAMED PUDDINGS AND VEGETABLES.
   (What is a steamer?)
10. USED TO TRIM PASTRY OR CUT STRINGS OR MARSHMALLOWS.
    (What are kitchen shears?)
11. USED TO COOL CAKES.
    (What is a cooling rack?)
12. USED TO MEASURE OIL, MILK, WATER, JUICE.
    (What are liquid measuring cups?)
13. USED FOR MEASURING THE TEMPERATURE OF SUGAR SYRUP.
    (What is a candy thermometer?)
14. USED FOR SCRAPING OR PEELING VEGETABLES AND FRUITS

(What is a vegetable peeler?)

15. USED TO MEASURE FLOUR, SUGAR, OATMEAL.
(What are dry measuring cups?)

17. WITHOUT SIDES, IT IS USED TO FRY SANDWICHES OR PANCAKES.
(What is a griddle?)

18. COOKS BY HIGH-FREQUENCY RADIOWAVES.
(What is a microwave?)

19. USED FOR CUTTING SHORTENING INTO DRY INGREDIENTS.
(What is a pastry blender?)

20. USED FOR LEVELING INGREDIENTS BEING MEASURED.
(What is a spatula?)

21. USED FOR GRATING CHEESE AND VEGETABLES TO VARYING DEGREES OF FINENESS.
(What is a grater?)

22. SERRATED OR SAW-TOOTHED EDGE KNIFE.
(What is used for slicing bread?)

23. USED FOR GREASING PANS OR BRUSHING DOUGH WITH MELTED BUTTER.
(What is a pastry brush?)

24. REMOVES CORES FROM FRUIT.
(What is an apple corer?)

<u>HOLD UP THE FOLLOWING PIECES OF EQUIPMENT.</u>

WHAT IS A PASTRY BLENDER?

WHAT IS A METAL SPATULA?

WHAT IS A WIRE WHISK?

WHAT IS A RUBBER SCRAPER?

WHAT IS A DRY MEASURING CUP?

WHAT IS A LIQUID MEASURING CUP?

WHAT IS A SIFTER?

WHAT IS A PASTRY BRUSH?

WHAT IS A COLANDER?

WHAT IS A FUNNEL?

WHAT IS A VEGETABLE PEELER?

****FINAL JEAPORDY QUESTION**—WORTH 10 POINTS

THIS PAN IS USED FOR POT ROASTING AND WAS NAMED AFTER A EUROPEAN COUNTRY.
(What is a Dutch Oven?)

Activity 25: What a Cut Up!

Competencies addressed by this activity:

03.	**Employ Food Laboratory Management Techniques**
03.01	Utilize Laboratory Equipment and Workspace
03.02	Practice Laboratory Safety and Sanitation Techniques

Activity: 25

WHAT A CUT UP!

Knives have been used for thousands of years. The earliest knife was probably made of stone. The steel knife first appeared in the 1300's. People at that time would carry their knives in their belts. They used them for hunting or whittling wood as well as for cutting food.

Knives can be used for slicing, peeling, chopping, and grating. There are probably more kinds of knives than any other kind of kitchen equipment. A few good knives are much better than a large set of poor knives. What determines this? The quality depends on the type of steel blade and the construction of the knife parts.

Knife blades must take and retain good cutting edges so the food will be cut and not mashed. A good blade will deep its sharp cutting edge for life. Different metals such as chromium or vanadium are sometimes added to the steel so they will not rust and will last longer. The very best knives are made of high carbon stainless steel. It has sufficient carbon content so that it can take a sharp edge and be kept sharp at home. If the knife blade bends yet snaps back into place, the balance and tempering are correct. This knife will cut well and last a very long time. It will not lose its sharp edge or darken in color.

Knife handles should be contoured to allow the user to hold the knife naturally. Quality knives generally have a hardwood or simulated wood handle. The finest handles have plastic driven into the real wood so they will be dishwasher safe. This type of handle is called pakkawood. Plain wood is not dishwasher safe and will warp. On a quality knife the tang (end of the blade that extends into the handle will extend the full length and width of the handle. This provides strength and balance. The tang should be attached to the handle by at least two rivets (although three are much better) so that it does not become loose.

Care of Knives—Use knives only on a cutting board. Don't use a knife for cutting paper or string. Wash, rinse and dry knives after using. Do not soak them in dishwater. Store knives separately. A sharp knife is much more efficient and safe to use than a dull knife.

Knives now come in a variety of shapes and sizes to fit many different household needs. A list of common knives and their main purposes follows:

PARING KNIFE—Short blade, used for trimming, peeling, cutting, paring.

BREAD KNIFE—Long, narrow serrated (saw-tooth) blade, slices bread without crushing it.

FRENCH OR CHEF'S KNIFE—Blade is long and fairly wide at the handle. The handle is made so that it can be grasped without the knuckles touching the board in the chopping process. Used for mincing and cutting nuts, celery, onion, etc.

GRAPEFRUIT KNIFE—Short, serrated (saw-tooth) blade, used for freeing citrus fruit sections.

APPLE CORER—Short, curved blade, removes cores from fruits.

STRAIGHT-EDGED SPATULA—Flat blade, levels ingredients being measured.

PEELER—Small, curved blades with opening in between, used for paring vegetables.

SLICING KNIFE—Long, narrow blade, end is shaped upwards, used for slicing meats, shredding cabbage or lettuce.

Now answer the questions on the worksheet.

Activity 26: Time Saving Kitchen Equipment

Competencies addressed by this activity:

03. Employ Food Laboratory Management Techniques

03.01 Utilize Laboratory Equipment and Work space

Activity:	**26**

TIME SAVING KITCHEN EQUIPMENT

EXPERIMENT DIRECTIONS:

Supplies needed: A paring knife, a slicing knife, a corer and slicer, a bread knife, four paper plates, and four apples.

Have four students come to the front of the room. Have them race to see which person can core and slice an apple into eight equal slices. The students using the apple corer should finish first. Pass out the apples to eat.

DISCUSSION:

It is important to know which is the best tool for a particular job. Using a wooden spoon instead of a fork to stir pie crust, may cause the product to be different in texture and appearance and perhaps, not as appetizing. Baking cookies in a cake pan may cause the cookies to be shaped in funny ways and not brown evenly because the heat has to flow up over the edges of the pans.

Each piece of equipment has its own specific use. What makes a useful gadget depends entirely upon you—what and how you cook and your work habits. If used correctly, the product should turn out just right! Can you think of some other pieces of time saving equipment besides the apple corer? (A vegetable peeler, an ice cream scoop for cookies, a microwave, a corn cobber, a cherry pitter, etc.)

SUMMARY QUESTIONS:

Name three pieces of kitchen equipment and an alternate that could be used to save time in preparing food.

A VARIETY OF ANSWERS COULD APPLY.

Activity 27: Food Lab Guidelines

Competencies addressed by this activity:

03.	**Employ Food Laboratory Management Techniques**
03.01	Utilize Laboratory Equipment and Work space
03.02	Practice Laboratory Safety and Sanitation Techniques
04.	**Demonstrate the Management of Food for Individuals and Families**
04.03	Practice Food Safety and Sanitation Techniques

Activity: 27

FOOD LAB GUIDELINES

Why are rules necessary when working in the kitchen? What should be the consequences of breaking the classroom rules? Why is a lab planning sheet necessary? What should be done with the completed lab sheet? You will be required to earn a certain number of lab points as part of your grade in class. They can be earned in many different ways.

PERSONAL APPEARANCE

Just as chefs have uniforms for their jobs, you should wear suitable clothing when preparing food. Do not wear coats or long-sleeved jackets in the kitchen units. An apron is a must for protecting your clothing.

Hair in food is not appetizing even if it is your own. Tie back hair to avoid the possibility of loose hairs garnishing your food.

Wash your hands with soap and water and dry them with paper towels before cooking. Dish towels are to be used for dishes and not for hand towels.

WORKING IN THE KITCHEN

Never borrow ingredients or equipment from another kitchen unit. If something is missing, ask the teacher to get it for you.

Always wash dishes in hot, soapy water. When you clean up, make sure the utensils and tools are clean and dry before you put them away.

Use a tray to carry the ingredients you will need from the supply table to the kitchen unit. Make sure you check the recipe carefully before you come to the supply table so that you will bring the equipment and tools needed for measuring.

Always sweep the dirt into a corner and then use a dust pan to brush up the dirt. Do not sweep it onto a carpeted area.

TIME SAVING TIPS

1. Read the recipe all the way through before beginning.

2. Get all the ingredients and equipment out before beginning.

3. Grate food on wax paper.

4. Pare fruits and vegetables over a paper towel that can then be thrown away.

5. Use as few utensils and appliances as possible.

6. Wash preparation dishes while the product is cooking.

7. Put used dish cloths and towels in the washer after use.

8. Hang up aprons when finished. (If they are dirty, check with the teacher before putting in washer. Any linen or aprons left on the floor after the lab reduces everyone's lab score by ten points.)

9. Assume responsibility. Example: If the flour canister is empty, fill it up.

THESE ARE MERELY SUGGESTED GUIDELINES. YOU MAY POST YOUR PARTICULAR CLASSROOM RULES IN A CONVENIENT SPOT, OR GIVE EACH STUDENT A COPY OF THEM.

Activity 28: Labeling and You

Competencies addressed by this activity:

02.	**Analyze Nutrition, Health, and Wellness Practices Across the Life Span**
02.06	Demonstrate a Daily Food Intake Plan
04.	**Demonstrate the Management of Food for Individuals and Families**
04.01	Examine Food-Purchasing Techniques

Activity: 28

LABELING AND YOU

The American way of eating may be hazardous to your health. This is part of the findings of a 1977 Senate report called "Dietary Goals for the United States".

They said: "We have reached the point where nutrition, or the lack of excess or the quality of it, may be the nation's number-one public health problem. The threat is not beri-beri, pellagra, or scurvy. Rather, we face the more subtle, but also more deadly reality of millions of Americans loading their stomachs with food which is likely to make them obese, to give them high blood pressure, to induce heart disease, diabetes, and cancer—in short, to kill them over the long term."

This Senate report also identified five of the top 10 causes of death as being related to our diet: cardio-vascular disease (heart and vessels), cancer, stroke, diabetes, and cirrhosis (liver disease).

Reading labels on foods will help you become a better consumer, and help you decide about the nutritional value of a product. If the label tells you it contains ingredients you'd like to avoid, you may decide to switch—to fresh foods or combine your own.

Often, additives are added to foods to:

- Preserve food and provide a longer shelf life
- Improve the texture, flavor and appeal of a food
- Add nutrition

Additives often have long chemical names. It is difficult to know what they are. However, the two most common additives in the U.S. are sugar and salt. Sugar includes corn syrup, dextrose, maltose, fructose or most any word that ends in "ose". Forms of salt include sodium, chloride, soda, soy sauce, seasoned salts, monosodium glutamate, and sodium citrate.

Some of the information of food labels is mandatory (required by law), other information is voluntary (written as a courtesy to the consumer).

Mandatory information includes:

1. The common name of the product
2. The style of the product (type of liquid, size of pieces)
3. The net weight of the contents
4. The name, address, and zip code of the company
5. Any special information that affects people with health problems
6. Presence of artificial color, flavor, or preservatives
7. A list of ingredients in order of weight in the package, from greatest to least

Activity 29: Label Guess

Competencies addressed by this activity:

02. Analyze Nutrition, Health, and Wellness Practices Across the Life Span
02.06 Demonstrate a Daily Food Intake Plan

04. Demonstrate the Management of Food for Individuals and Families
04.01 Examine Food-Purchasing Techniques

Activity: 29

LABEL GUESS

DIRECTIONS: Collect the ingredient lists from the following foods:

- Sweetened cereal
- Fiber rich cereal
- Snack crackers
- Prepared sauce (such as Manwich)
- Prepared soup

Enlarge the information so that the class can see it (or place the lists on transparencies). Place food containers at the front of the room. See if students can match the ingredient list to the appropriate food.

Ingredients are listed by weight—from largest amount to the smallest amount.

Q: Do you know what you are really eating when you purchase processed foods?

Using a box of food as an example, review this information to students.

1. Food labels provide consumers with much helpful information (as well as a lot of advertising). Reading labels can help us all be better consumers.

2. Nutrition labeling is a food labeling program which provides consumers with information about the nutrients in the foods they buy. Placing a nutrition information panel on the label is a voluntary service for consumers provided by manufacturers. However, nutrition information panels on food labels are required by manufacturers when nutrients are added to the food product or when nutritional claims are made on the label or ads.

3. When a nutrition information panel is on a food label, information is given in this order:
    A. Size of a serving
    B. Number of servings in the container
    C. Number of calories per serving
    D. Grams of protein in one serving
    E. Grams of carbohydrate in one serving
    F. Grams of fat in one serving
    G. The percentage of the US RDA in one serving for protein, vitamin A, vitamin C, thiamin, riboflavin, niacin, calcium, iron

SUMMARY QUESTIONS:

1. Name two times nutrition information is required on a label.
   WHEN NUTRIENTS ARE ADDED OR WHEN A NUTRITIONAL CLAIM IS MADE.

2. How are ingredients listed on a label?
   INGREDIENTS ARE LISTED BY WEIGHT—FROM LARGEST AMOUNTS TO SMALLEST

3. Nutrients are listed on food labels by the amount of what?
   PER SERVING

Activity 30: Technology and Grocery Shopping: "Let Online Grocery Stores Simplify Your Life with Hassle-Free Grocery Shopping!"

Competencies addressed by this activity:

01.	**Evaluate Factors Affecting Individual and Family Food Choices**
01.01	Analyze Factors Affecting Food Choice
01.03	Evaluate the Effect of the Family Life Cycle on Food Choices
04.	**Demonstrate the Management of Food for Individuals and Families**
04.01	Examine Food-Purchasing Techniques

Activity:	**30**

Technology and Grocery Shopping:
"LET ON-LINE GROCERY STORES SIMPLIFY YOUR LIFE WITH HASSLE-FREE GROCERY SHOPPING!"

Web Sites: Peapod online Grocery Shopping - http://www.peapod.com

Albertson's online Grocery Store – http://www.albertsons.com
(online shopping at Albertson's is currently only available in the Dallas/Ft. Worth area, you can visit the on-line store by using the Dallas/Ft. Worth zip code: 75002)

On-line grocery shopping has become an increasingly popular concept as the amount of spare time individuals and families have for grocery shopping has decreased. Consumers, in larger cities, now have a variety of on-line grocery stores available that will deliver groceries free of charge after they have been ordered and purchased via the Internet.

DIRECTIONS: Have students visit the on-line grocery stores listed above and evaluate each for cost, time, ease of use, convenience, and features. After students have visited the store, discuss the use and implications of on-line shopping.

Benefits Claimed by Peapod On Line Grocery Store:

- Trained shoppers choose the freshest and best foods just like you would
- Professional produce specialists hand-pick only the best fruits and vegetables
- Peapod has shopped and delivered over one million orders
- You select the delivery time best for you – 7 days a week
- We pack your order carefully so your perishables stay fresh and your frozen items arrive frozen
- Never lug your groceries again. Your friendly Peapod driver bring the bags to your door
- Take advantage of all stores specials and sales
- Use our sort feature to find the best value
- Avoid impulse buying and stay within your grocery budget
- Quickly locate all your items with our 'Find Item' feature
- Shop from lists of your previous purchases and personal shopping lists you create
- Instantly compare nutritional information and review ingredients

Activity 31: Food Safety and Sanitation

Competencies addressed by this activity:

03. Employ Food Laboratory Management Techniques

03.02 Practice Laboratory Safety and Sanitation Techniques

04. Demonstrate the Management of Food for Individuals and Families

04.03 Practice Food Safety and Sanitation Techniques

Activity: 31

FOOD SAFETY AND SANITATION

DIRECTIONS: The teacher will identify the safety and sanitation rules he/she will use in the classroom.

Some suggested rules are:

A. Utensils used in kitchen must be kept clean
B. Keep electrical appliances away from water and wet hands
C. Deep pot handles turned so they are over the stove and not sticking out over the edge of the stove
D. Do not use wet pot holders or towels to remove hot pans from the oven
E. Do not taste food with the mixing spoon you are using to prepare food
F. Know how to put out kitchen fires

Option 1: Introduce the selected rules to the class, explaining each rule and WHY the rule is necessary. Include students in the process of identifying WHY each rule is necessary. Divide the class into groups and have each group design a mini poster dealing with one of the safety rules. Then hang the posters in the food preparation area to remind students of the importance of practicing safety and sanitation in the kitchen area.

Option 2: Divide the class into groups by kitchen areas, such as range, sink, etc., and give the students about five minutes to identify some rules necessary for their area. Let each group report their list to the class, listing them on poster board as the students report. (The teacher should be prepared to add rules the students don't think of.) The posters can then be hung in the area(s) to which they apply.

NOTE: The teacher may wish to use information found in a classroom text as a supplement to teach more safety and sanitation guidelines. He/she may also choose to use a video on kitchen safety.

Activity 32: Fast Food Facts!

Competencies addressed by this activity:

01.	**Evaluate Factors Affecting Individual and Family Food Choices**
01.03	Evaluate the Effect of the Family Life Cycle on Food Choices
02.	**Analyze Nutrition, Health, and Wellness Practices Across the Life Span**
02.02	Evaluate the Nutrient Needs and Sources for Individuals and Families
02.03	Analyze the Relationship Between Nutrition and Health
04.	**Demonstrate the Management of Food for Individuals and Families**
04.02	Demonstrate Basic Food Selection and Storage Techniques
04.04	Demonstrate Meal Management Issues and Techniques
04.05	Demonstrate Meal Planning Issues and Techniques

Activity: **32**

Fast Food Facts!

From the office of the Minnesota Attorney General

http://www.olen.com/food/book.html

DIRECTIONS: After reading "Fast Food Facts", have students search for healthy foods from a variety of fast food restaurants using this interactive Food Finder.

Supplemental Resource: Interactive Food Finder by Olen - www.olen.com/food

Did you know there are more than 300,000 fast food restaurants in the U.S. Why is fast food so popular? Because it is convenient, predictable, and fast. Fast food has become a part of the busy American lifestyle. But, nutrition experts point out, fast food is often high in calories, sodium, fat and cholesterol. This does not mean fast food is bad. But it does mean you should fit fast food into a balanced, healthy diet.

To help you make fast food choices and be an informed consumer, the Minnesota Attorney General's Office has developed the guide Fast Food Facts, from which the Food Finder is derived Included in the guides are the calorie, fat, sodium and cholesterol counts of menu items from popular fast food restaurants, based on the companies' own nutritional analyses. Below are some basic facts to help you make nutritional comparisons with this guide.

Calories

On the average, to maintain desirable weight, men need about 2,700 calories per day and women need about 2,000 calories per day. It is not well understood why some people can eat much more than others and still maintain a desirable weight. However, one thing is certain -- to lose weight, you must take in fewer calories than you burn. This means that you must either choose foods with fewer calories, or you must increase your physical activity, preferably both.

Fat

Research shows that eating too many high-fat foods contributes to high blood cholesterol levels. This can cause hardening of the arteries, coronary heart disease and stroke. High-fat diets may also contribute to a greater risk for some types of cancer, particularly cancers of the breast and colon.

While most Americans get more than 40 percent of their daily calories from fat, the American Heart Association recommends limiting fat to less than 30 percent of daily calories. This means limiting the fast you consume to 50-80 grams per day.

Percent of Calories from Fat

The category in this guide "% of Calories from Fat" is calculated by multiplying the grams of fat by nine (there are nine calories per gram of fat), then dividing the calories of fat by the total number of calories in the food.

Cholesterol

The American Heart Association recommends eating no more than 300 milligrams of cholesterol per day. But don't just look at the cholesterol contained in a food item. A product high in total fat or saturated fat can be an even bigger contributor to high
blood cholesterol levels. For example, "cholesterol free" potato chips may be high in fat and may contribute to raising your cholesterol level, because high-fat foods cause the formation of cholesterol in the body, even if the food itself contains no cholesterol.

Salt

Everyone needs some sodium in the diet to replace routine losses. The Food and Nutrition Board of the National Academy of Sciences/ National Research Council has estimated that an "adequate and safe" intake of sodium for healthy adults is 1,100 to 3,300 milligrams a day, the equivalent of approximately ½ to 1 ½ teaspoons of salt. Americans, on average, consume at least twice that amount -- 2,300 to 6,900 milligrams of sodium daily, according to estimates by the Food and Nutrition Board. For some people, consuming high amounts of sodium can cause high blood pressure.

Fast Food Meals

Fast food meals can be high in calories, fat, sodium, and cholesterol. See how easily these red-flag items can add up:

1. Burger

Quarter-Pound Cheeseburger, Large Fries, 16 oz. soda (McDonald's)

This Meal	Recommended Daily Intake
1,166 calories	2,000-2,700 calories
51 g fat	No more than 50-80 g
95 mg cholesterol	No more than 300 mg
1,450 mg sodium	No more than 1,100-3,300 mg

2. Pizza

4 slices Sausage and Mushroom Pizza, 16 oz. soda (Domino's)

This Meal	Recommended Daily Intake
1,000 calories	2,000-2,700 calories
28 g. fat	No more than 50-80
62 mg. cholesterol	No more than 300 mg
2,302 mg. sodium	No more than 1,100-3,300 mg

3. Chicken

2 pieces Fried Chicken (Breast and Wing), Buttermilk Biscuit, Mashed Potatoes and Gravy, Corn-on-the-Cob, 16 oz. Soda (KFC)

This Meal	Recommended Daily Intake
1,232 calories	2,000-2,700 calories
57 g. fat	No more than 50-80
157 mg. cholesterol	No more than 300 mg
2,276 mg. sodium	No more than 1,100-3,300 mg

4. Taco

Taco Salad, 16 oz. soda (Taco Bell)

This Meal	Recommended Daily Intake
1,057 calories	2.000-2,700 calories
55 g. fat	No more than 50-80
80 mg. cholesterol	No more than 300 mg
1,620 mg. sodium	No more than 1,100-3,300 mg

Better Fast Food Choices

This is not meant to scare you away from fast food entirely. Rather, it is intended to provide you with information to help you make better fast food choices. Realize that it is still possible to eat fast food occasionally and follow a sensible diet. See how these meals stack up against the previous examples:

1. Burger

Hamburger, Small Fries, 16 oz. soda (McDonald's)

This meal:	Recommended daily intake:
481 calories	2,000-2,700 calories
19 g fat	No more than 50-80 g
30 mg cholesterol	No more than 300 mg
665 mg sodium	No more than 1,100-3,300 mg

2. Pizza

3 slices Cheese Pizza, 16 oz. diet soda (Domino's)

This meal:	Recommended daily intake:
516 calories	2,000-2,700 calories
15 g fat	No more than 50-80 g
29 mg cholesterol	No more than 300 mg
1,470 mg sodium	No more than 1,100-3,300 mg

3. Chicken

1 piece Fried Chicken (Wing), Mashed Potatoes and Gravy, Cole Slaw, 16 oz. diet soda (KFC)

This meal:	Recommended daily intake:
373 calories	2,000-2,700 calories
19 g fat	No more than 50-80 g
46 mg cholesterol	No more than 300 mg
943 mg sodium	No more than 1,100-3,300 mg

4. Taco

Three Light Tacos, 16 oz. diet soda (Taco Bell)

This meal:	Recommended daily intake:
420 calories	2,000-2,700 calories
15 g fat	No more than 50-80 g
60 mg cholesterol	No more than 300 mg
840 mg sodium	No more than 1,100-3,300 mg

Fast Food Surprises

Fast-food chains have noticed that consumers are more health-conscious, and as a result many chains are adding healthier choices to their menus. Here are examples of some of these better alternatives:

Arby's Light Roast Chicken Sandwich:
276 calories
7 g fat
23% calories from fat
33 mg cholesterol
777 mg sodium

Burger King's Chunky Chicken Salad
142 calories
4 g fat
25% calories from fat
49 mg cholesterol
443 mg sodium

McDonald's Vanilla Shake
310 calories
5 g fat
15% calories from fat
25 mg cholesterol
170 mg sodium

Wendy's Chili
210 calories
7 g fat
30% calories from fat
30 mg cholesterol
800 mg sodium

Activity 33: Eating Etiquette & Table Manners

Competencies addressed by this activity:

04. **Demonstrate the Management of Food for Individuals and Families**

04.06 Develop Skills to Foster a Positive Mealtime Environment

Activity: 33

EATING ETIQUETTE & TABLE MANNERS

Introduce students to the food lab, review basic table manners and let them know your expectations. Each teacher can cover the etiquette items he/she thinks are most important.

Manners are something that need to be practiced at home, school, and when eating at a restaurant. Good manners should be practiced regularly to avoid feeling uncomfortable when the need arises.

A few suggested manners include:

- Don't talk with your mouth full
- Take small enough bites so you can chew while keeping your mouth closed
- Wash hands before eating
- Keep the chairs flat on the floor while eating
- Keep your elbows off the table
- Ask someone to pass foods that you cannot reach easily
- Take a small to medium size serving until all have been served; then take seconds only if there is food left and you want more
- Use the correct piece of flatware for the job
- Be as inconspicuous as possible about accidents
- Hold the flatware (silverware) correctly while using it
- If you don't care for a certain food, don't take any of that food, keeping your food dislikes personal

Activity 34: Measuring Race

Competencies addressed by this activity:

03.	**Employ Food Laboratory Management Techniques**
03.01	Utilize Laboratory Equipment and Work space
05.	**Demonstrate the Preparation of Nutritious Foods for Individuals and Families**
05.01	Demonstrate Basic Food Preparation Skills

Activity:	**34**

MEASURING RACE

DIRECTIONS: Have a race between two students to see who can measure equivalent volumes the fastest using different methods for measuring. Both students should begin measuring at the same time. This activity illustrates how using the largest possible measurement saves a lot of time in food preparation.

Student #1 should have:
- a dry measuring cup
- a liquid measuring cup
- a tablespoon
- a mixing bowl

Student #2 should have:
- a tablespoon
- a teaspoon
- a mixing bowl

Both students should have:
- flour
- salt
- water

Student #1 should measure:
- 1 cup flour
- ¼ cup water
- 1 Tbsp. Salt

Student #2 should measure:
- ¼ cup flour (4 times)
- 1 Tbsp. Water (4 times)
- 1 teaspoon salt (3 times)

NOTE: If the teacher doesn't want to waste the ingredients used in this activity, three (3) small containers could be used to keep the ingredients separate for reuse.

Activity 35: **Preparing Vegetables**

Competencies addressed by this activity:

05.	**Demonstrate the Preparation of Nutritious Foods for Individuals and Families**
05.01	Demonstrate Basic Food Preparation Skills
05.02	Explore and Prepare Nutritious Meals Using Fruits and Vegetables

Activity:	**35**

PREPARING VEGETABLES

DIRECTIONS: Use this information to stimulate a class discussion on the proper methods of preserving nutrients, taste, and visual appeal when preparing vegetables.

1. Serve vegetables raw or cooked. Vegetables can be enhanced by adding herbs, sauces, spices, and garnishes.

2. Vegetables almost always need some trimming to remove damaged leaves, bruised spots,

3. Each part of the plant differs in nutrient content. The blade is rich in many nutrients. The outer leaves are coarser and contain higher concentrations of vitamins and minerals than the more tender leaves and buds they protect.

4. The three R's of boiling vegetables are:
   (W-C-S: Water, Cooking time, Surface Area)
   - **REDUCE THE AMOUNT OF **WATER** USED.
     The volume of water used is very important. Vitamin C and all the B Vitamins plus some of the mineral compounds are water soluble.

   - **REDUCE THE LENGTH OF **COOKING** TIME.
     The longer you cook a food, the more nutrients you destroy. Letting vegetables sit in water leeches out many of the nutrients. Avoid this by placing vegetables in boiling water and cooking them only until they are tender.

   - **REDUCE THE AMOUNT OF PLANT **SURFACE** EXPOSED.
     The greater the surface area that is exposed to the air, the greater the vitamin loss. Cut just the amount of vegetables needed and only as far in advance of cooking and eating as necessary.

SUMMARY QUESTIONS:

1-3. WHAT ARE THE THREE R'S OF COOKING VEGETABLES? (W-C-S)
- Reduce the amount of water used. (W)
- Reduce the amount of cooking time. (C)
- Reduce the amount of plant surface area exposed. (S)

Activity 36: Experimental Vegetable Lab

Competencies addressed by this activity:

04.	**Demonstrate the Management of Food for Individuals and Families**
04.02	Demonstrate Basic Food Selection and Storage Techniques
05.	**Demonstrate the Preparation of Nutritious Foods for Individuals and Families**
05.02	Explore and Prepare Nutritious Meals Using Fruits and Vegetables

Activity: 36

EXPERIMENTAL VEGETABLE LAB

DIRECTIONS: Make an experimental vegetable lab using a frozen vegetable. You may want to use one that most students have not tasted. Divide the package of vegetables in half and cook one half in the microwave oven and boil the other half on the range in a saucepan. The vegetables will have more color if the pan is left uncovered. (A covered and an uncovered pan could be used as part of the experiment.) Cook the vegetables until just tender. As a class, compare the time, convenience, appearance, flavor and texture of both cooking methods.

SUMMARY QUESTIONS:

1. WHICH COOKING METHOD HELD THE BRIGHT COLOR OF THE VEGETABLE BEST?
   Microwave

2. WHICH COOKING METHOD PRODUCED A VEGETABLE WITH THE FRESHER TASTING FLAVOR?
   Microwave

3. WHICH COOKING METHOD PRODUCED A VEGETABLE WITH A TEXTURE CLOSER TO FRESH?
   Microwave

Activity 37: Fruit Browning Experiment

Competencies addressed by this activity:

04.	**Demonstrate the Management of Food for Individuals and Families**
04.02	Demonstrate Basic Food Selection and Storage Techniques
05.	**Demonstrate the Preparation of Nutritious Foods for Individuals and Families**
05.02	Explore and Prepare Nutritious Meals Using Fruits and Vegetables

Activity: 37

FRUIT BROWNING EXPERIMENT

Some fruits turn brown when they are exposed to air. They lose their appetizing appearance. This is a process called oxidation. These fruits contain chemicals called enzymes that combine with the oxygen in the air and discolor fruits.

When you dip the fruits in a juice high in ascorbic acid mixed with water, you coat the fruits with the citrus juice and keep the oxygen and enzymes apart for a time. The acid in the citrus juice also slows down the enzymes. You can substitute an ascorbic acid mixture—the same product used in freezing many fruits.

Browning is not a reversible process. Fruit that becomes brown cannot be fully restored to its natural color by placing it in a solution.

To prevent browning, cover the fruit immediately after peeling or slicing with a juice containing vitamin C, ascorbic acid solution or salt water.

Bananas deteriorate the longer they sit in a liquid solution. High acid fruits do not brown when exposed to air.

Some people place peeled fruit in water to prevent it from turning dark not realizing that this causes loss of water-soluble vitamins, minerals and natural sugars. There are better ways to prevent fruit from darkening when peeled. Dipping the cut fruit in an ascorbic acid solution or citrus juice will keep the fruit light and also add to its vitamin C content.

FRUIT BROWNING EXPERIMENT

One point is possible for each correct number. (20 points possible)

SAMPLE	No Browning	Some Browning	Browned	Withered
1. Uncovered				
2. Covered (lid)				
3. Covered (water)				
4. Covered (salt)				
5. Covered (ascorbic acid)				
6. Covered (lemon juice)				

7. When does fruit begin to brown?

8. What is another name for ascorbic acid?

9. Why does the peeling on a fruit keep it from browning?

10. Why does the apple in water turn more brown than the others?

11. What is lost when fruit is allowed to set in water?

12. What is the scientific term for fruit browning?

13. Does an orange brown when it is cut? Why or why not?

14. How can you change a browned fruit back to its natural appearance?

15. What kind of fruit deteriorates when left in a liquid solution?

16. Which apple browned the most?

17. Which apple browned the least?

18-20. Name three fruits that do not brown when cut.

FRUIT BROWNING EXPERIMENT—KEY

1-6. For each line you completed on the chart, you will receive 1 point.

7. When does fruit begin to brown?
WHEN FIRST EXPOSED TO AIR.

8. What is another name for ascorbic acid?
VITAMIN C

9. Why does the peeling on a fruit keep it from browning?
IT KEEPS IT AWAY FROM THE OXYGEN IN THE AIR

10. Why does the apple in water turn more brown than the others?
THE WATER PREVENTS THE APPLE'S EXPOSURE TO THE AIR; HOWEVER, THERE IS ALSO OXYGEN IN THE WATER

11. What is lost when fruit is allowed to set in water?
VITAMINS, MINERALS, NATURAL SUGARS

12. What is the scientific term for fruit browning?
OXIDATION

13. Does an orange brown when it is cut? Why or why not?
NO. AN ORANGE CONTAINS ASCORBIC ACID OR VITAMIN C

14. How can you change a browned fruit back to its natural appearance?
YOU CANNOT. FRUIT BROWNING IS NOT A REVERSIBLE PROCESS.

15. What kind of fruit deteriorates when left in a liquid solution?
BANANAS

16. Which apple browned the most?
UNCOVERED APPLE

17. Which apple browned the least?
APPLE IN ASCORBIC ACID SOLUTION

18-20. Name three fruits that do not brown when cut.

ANY FRUITS HIGH IN ASCORBIC ACID—ORANGES, LEMONS, LIMES

Activity 38: Shopping for Fruits and Vegetables

Competencies addressed by this activity:

04.	**Demonstrate the Management of Food for Individuals and Families**
04.01	Examine Food-Purchasing Techniques
04.02	Demonstrate Basic Food Selection and Storage Techniques
05.	**Demonstrate the Preparation of Nutritious Foods for Individuals and Families**
05.02	Explore and Prepare Nutritious Meals Using Fruits and Vegetables

Activity: 38

SHOPPING FOR FRUITS AND VEGETABLES

Name_____ Class_____

DIRECTIONS: Have students evaluate the name brand, store brand, and local variety of the following foods by comparing price per ounce, and the ingredients as well as taste, texture and flavor.

VARIETY	Name on Label	Price Per Ounce	3 Main Ingredients
GREEN BEANS			
Name Brand			
Store Brand			
Local Variety			
CORN			
Name Brand			
Store Brand			
Local Variety			
FRUIT COCKTAIL			
Name Brand			
Store Brand			
Local Variety			
PINEAPPLE			
Name Brand			
Store Brand			
Local Variety			

Answer the following questions on your own paper, or on the back of this sheet:

1. Which green beans are the most expensive per ounce?
2. Which green beans are the least expensive per ounce?
3. Considering the ingredients and the price, which green beans are the best buy?
4. Which corn is the most expensive per ounce?
5. Which corn is the least expensive per ounce?
6. Considering the ingredients and the price, which corn is the best buy?
7. Which fruit cocktail is the most expensive per ounce?
8. Which fruit cocktail is the least expensive per ounce?
9. Considering the ingredients and the price, which fruit cocktail is the best buy?
10. Which pineapple is the most expensive per ounce?
11. Which pineapple is the least expensive per ounce?
12. Considering price and cost, which pineapple is the best buy?

Activity 39: Tasty Cheese

Competencies addressed by this activity:

04.	**Demonstrate the Management of Food for Individuals and Families**
04.01	Examine Food-Purchasing Techniques
04.02	Demonstrate Basic Food Selection and Storage Techniques
05.	**Demonstrate the Preparation of Nutritious Foods for Individuals and Families**
05.03	Explore and Prepare Nutritious Meals Using the Milk Food Group

Activity: 39

TASTY CHEESE

DIRECTIONS: Purchase the following kinds of cheese: Swiss, mild white and yellow cheddar, American, Monterey Jack. (You may substitute other types.) Cut into small cubes. Place a small sign with the kind and price per pound by each. Have toothpicks available to spear each sample. Let students try the different types and complete the TASTY CHEESE CHART.

YOU MAY WISH TO SERVE A COUPLE OF CRACKERS TO EACH STUDENT TO GO ALONG WITH THE CHEESE.

CHEESE MAKING

Cheese making is an ancient art. It is thought to have originated with some desert traveler who was on a long journey. At that time there were no bags, so he carried some milk along in the cleaned-out stomach of a cow. When he reached his destination, he found the mild had turned to a solid. Tasting some of the mixture, he found it was quite good. There is a natural enzyme, "rennin," in the cow's stomach, which causes the milk protein (the solid part) to settle out from the liquid. The solid part is called the curd and the liquid part is called whey. Cheese is still made today with rennin, which is taken from a cow's stomach. The curd is cut and stirred to remove the whey. The curd is then mixed with salt and packed into cheesecloth-lined hoops. The cheese is called green cheese at this point. This green cheese is dried for several days and then coated with hot paraffin wax to prevent moisture loss during the aging process or curing time. It is aged in a temperature controlled room. It is cured a short time for mild cheese, longer for medium sharp and longer still for sharp cheese. Aged cheese will be more expensive than milder cheese because the storage costs money.

Depending on the recipe used, the cheese will have changes in texture and flavor. Some become softer, others become harder and even crumbly, and others change flavor. Some cheeses even develop holes (Swiss cheese), which is injected with carbon dioxide gas.

TASTY CHEESE CHART

Name_____ Class_____

NAME	Cost per pound	Texture	Flavor	Rating
Swiss Cheese				
White Cheddar				
Yellow Cheddar				
Monterey Jack				
American				

TEXTURE— Firm, crumbly, smooth
FLAVOR— Milk, strong, sharp
RATING— Rate from 1 to 10 to how you liked the taste.
10—Liked most 1—Liked least

1. Which cheese is the most expensive?

2. Which cheese is the least expensive?

3. Which cheese did you like best? Why?

4. Which cheese did you like least? Why?

Activity 40: Cheese Cookery

Competencies addressed by this activity:

04.	**Demonstrate the Management of Food for Individuals and Families**
04.03	Practice Food Safety and Sanitation Techniques
05.	**Demonstrate the Preparation of Nutritious Foods for Individuals and Families**
05.03	Explore and Prepare Nutritious Meals Using the Milk Food Group

Activity: 40

CHEESE COOKERY

Cheese, a high protein food, is made from mild milk. Thus, the same principles that apply to milk cookery apply to cheese cookery. A low heat should always be used.

A hard cheese softens and then melts when heated at low to moderate temperatures. Further heating results in the separation of fat and the development of a tough, rubbery curd, which will form long strings when stirred with a spoon. The cheese will harden on cooling.

Use ripened cheese in cookery, because unripened cheese may not blend with the other ingredients.

Grating the cheese before combining it with other foods helps it to melt without overheating. It is also a good idea to bring the cheese to room temperature before heating. Cheese sauces should be cooked in a double boiler or over very low heat with continuous stirring. Well-ripened and processed cheeses blend better in mixtures than mild natural cheese and are less likely to produce stringiness.

Cheese dishes should be served hot immediately after the cooking is completed. All cheeses must be cooked carefully as they can become tough and rubbery if the temperature is too high or cooking time is too long.

Sometimes cheese is protected while cooking: in grilled cheese sandwiches, the bread covers the cheese; in pizza, the sauce protects the cheese.

Cheese can be added to many foods. It improves their nutritional value. When added to vegetables, pastas, or legumes it improves their protein value so they can be used as a meat substitute.

Cheese is used in pastries, fondues, souffles, soups and as a filling for pasta.

SUMMARY QUESTIONS:

1. Principles that apply to cheese cookery apply to what other protein food?
   MILK
2. Always use what temperature when cooking cheese?
   LOW
3. What are the two results of cooking cheese improperly?
   ANY TWO: STRINGY, TOUGH, RUBBERY

Activity 41: Cooking with Milk

Competencies addressed by this activity:

04. Demonstrate the Management of Food for Individuals and Families

04.02 Demonstrate Basic Food Selection and Storage Techniques

04.03 Practice Food Safety and Sanitation Techniques

05. Demonstrate the Preparation of Nutritious Foods for Individuals and Families

05.03 Explore and Prepare Nutritious Meals Using the Milk Food Group

Activity: 41

COOKING WITH MILK

THE OBJECTIVES OF MILK COOKERY IS TO PREVENT:

1. SCUM FORMATION
2. BOILING OVER
3. SCORCHING
4. CURDLING

SCUM FORMATION

Demonstrate the following experiment dealing with the formation and prevention of scum while cooking with milk:

Heat two saucepans each filled with ½ cup milk.

1. Heat the first saucepan on low heat. When the milk is warm, beat with a rotary beater to form a foam. Heat carefully to a simmer. Check to see if scum forms. As foam disappears, beat again.

2. Heat the second saucepan on high heat. Bring the milk to the simmer point. Watch to see if a scum forms. Remove the scum and wait to see if another one forms. Check the appearance of the bottom of the pan.

SCIENTIFIC PRINCIPLES INVOLVED:

Milk contains vitamins, minerals and protein. Heat coagulates and makes protein become firm. The scum that forms on top of the milk and the substance you see sticking to the sides of the second pan are protein particles that have changed due to heat. Milk scorches very easily when exposed to high heat. A thin film forms when using low heat; a thick film forms when using high heat. As quickly as the scum is removed, it will form again unless measures are taken to prevent this.

Whipping the first pan with the beater produced a foam that prevented scum from forming. This foam of bubbles lasted only a few minutes.

FORMATION OF A SCUM CAN BE PREVENTED BY:

1. Using a covered container
2. Stirring the milk during heating
3. Beating the milk to form a foam

VALUABLE PROTEIN IS LOST IF A SCUM IS FORMED AND THEN THROWN AWAY.

BOILING OVER

When a film forms on boiled milk, pressure builds under the scum which forces the milk to break through the scum and boil over. When this film is prevented from forming, it will eliminate the milk from boiling over

SCORCHING OF MILK

The protein that coagulated on the sides and bottom of the second pan occurred because a high heat was used. Sometimes a brown film develops. This film contains protein and mild sugar lactose. A low heat must be used to prevent scorching. Stirring or beating the mixture will not prevent this film from developing.

When heated, some of the protein in the milk settles on the sides and bottom of the pan. This will turn brown (scorch) unless a very low heat is used. Heating milk in a double boiler will help eliminated this problem, but it takes much longer to cook.

CURDLING OF MILK

SCIENTIFIC PRINCIPLES INVOLVED: When acid is added milk to, the protein settles out in white clumps or curds and separates from the liquid. The milk is said to be curdled.

Curdling of milk can be prevented by:

1. Thickening the milk with starch before combining foods
2. Using a low temperature for cooking the food
3. Using fresh milk instead of sour milk

HOMEMADE YOGURT (Can be demonstrated)

Microwave temperature probe or thermometer	1/3 cup plain yogurt
2-1/2 cups nonfat dry milk powder	desired fruit
3-1/2 cups water	(makes 4 cups)

Place dry milk in 2-quart casserole. Slowly stir in water until dry milk dissolves. Microwave at HIGH for 8-12 minutes or until the temperature reaches 190 degrees, stirring it twice. Let the mixture cool to 115 degrees. Stir a small amount of the hot mixture into the yogurt. Cover with plastic wrap. Return to the milk stirring constantly.

Insert microwave thermometer through plastic so it rests in center of milk mixture. Check the temperature periodically. Reduce microwave power to 30% (Medium Low). When the temperature falls below 110 degrees, microwave it until it returns to 115 degrees. The mixture will appear thick (set-up). Transfer the yogurt to the refrigerator to chill it. Add fruit. Store it in the refrigerator no longer than two weeks.

SUMMARY QUESTIONS:

1. What cell-building nutrient will scorch when using high heat?
   PROTEIN

2. Why does milk sometimes boil over when cooking?
   PRESSURE BUILDS UP UNDER THE SCUM

3. What is the scientific name for milk sugar?
   LACTOSE

Activity 42: From Cream to Butter

Competencies addressed by this activity:

04. **Demonstrate the Management of Food for Individuals and Families**

04.07 Evaluate the Impact of Sciences and Technology on food Composition, Safety, and Other Issues

05. **Demonstrate the Preparation of Nutritious Foods for Individuals and Families**

05.03 Explore and Prepare Nutritious Meals Using the Milk Food Group

Activity: 42

FROM CREAM TO BUTTER

DIRECTIONS:

Ask students if they have ever seen a butter churn or made butter with one. Have students make butter from cream. Place one pint of heavy whipping cream in several small glass jars with tightly fitting lids. Remove whipping cream from the refrigerator about ½ hour before starting. Have students each take a turn shaking the jar and seeing how long it takes until the butter is formed. Spread the butter on crackers and taste it.

- Discuss with the students how modern food technology has improved our way of life.
- How would students like to make everything from scratch?

Activity 43: Pan Broiling Experiment–Dry Heat Method

Competencies addressed by this activity:

04. **Demonstrate the Management of Food for Individuals and Families**

04.03 Practice Food Safety and Sanitation Techniques

05. **Demonstrate the Preparation of Nutritious Foods for Individuals and Families**

05.04 Explore and Prepare Nutritious Foods Using Meat, Poultry, Fish, Eggs and Legumes

Activity: 43

PAN BROILING EXPERIMENT—DRY HEAT METHOD

EXPERIMENT—Use two meat patties of the same weight and diameter. Pan fry one at a high temperature and the other at a low temperature. Compare the weight, size, tenderness and moistness of each and record the results on the Pan Broiling Meat Experiment Chart. The following information about meat cookery may be given during the experiment:

COOKERY—Meat is cooked to improve its flavor, change its color and aroma, make it more tender and destroy harmful organisms.

Muscle fibers, which we eat as meat, are held together by connective tissue. A protein called collagen is tough and elastic and makes up the connective tissue that holds muscle fibers together. This can be softened by cooking.

Meats are classified into tender and less tender cuts. The tender cuts contain less connective tissue than the less tender cuts. The tender cuts of meat come from muscles which are rarely exercised.

Using a low temperature to cook meat will coagulate the meat protein and prevent toughening. Meats should be cooked only until they are done; otherwise the protein over-coagulates and the meat becomes dry and tough. The tender cuts of meat contain little connective tissues and need to be cooked only long enough to coagulate the protein.

Roasting, broiling, and pan broiling are the dry heat methods for cooking meat.

ROASTING—Roast meat by placing it in a large pan in the oven. Use low temperatures (300 to 350 degrees) for the best results. Use a meat thermometer to test for doneness. Insert the thermometer into the thickest part of the meat, away from the bone and fat. Meat will continue to cook for a time after removal from the oven. Beef can be cooked rare (red color), medium (pink color) or well-done (brown color). Veal, lamb and pork are usually cooked until well done.

BROILING—This is cooking meat above or below a direct source of heat such as in the broiler or in an oven. Meat is placed on a rack which allows fat and juices to fall through the rack and drain off the meat. The larger the piece of meat, the farther it should be kept from the source of heat. When the meat is half done it is turned to the other side.

PAN BROILING—This is cooking meat in a skillet without adding extra fat. As the fat melts, it should be poured off. After the meat is brown on one side it should be turned over. Do not cover the meat of add water as this would be braising and not pan broiling.

SUMMARY QUESTIONS:

1. What is the type of tissue which hold muscle fibers together?
   CONNECTIVE TISSUE

2. Name three dry heat methods for cooking meat.
   ROASTING, BROILING, PAN BROILING

3. Using a low temperature to cook meat should prevent what?
   TOUGHENING

Activity 44: Pan Broiling Meat Experiment

04. Demonstrate the Management of Food for Individuals and Families

04.03 Practice Food Safety and Sanitation Techniques

04.05 Demonstrate Meal Planning Issues and Techniques

05. Demonstrate the Preparation of Nutritious Foods for Individuals and Families

05.04 Explore and Prepare Nutritious Foods Using Meat, Poultry, Fish, Eggs and Legumes

Activity:	**44**

PAN BROILING MEAT EXPERIMENT

After observing the class demonstration on cooking meat, record the data from the experiment below and answer the questions. (two points each)

Two Points Each	**High Heat - Sample # 1`**	**Low Heat - Sample # 2**
1. Pre-cooked weight		
2. Pre-cooked diameter		
3. Cooking temperature		
4. Cooked weight		
5. Cooked diameter		
6. Cooked appearance		
7. Cooked tenderness 1 = very tender, 5 = tough		
8. Cooked moistness 1 = very moist, 5 = dry		

(ONE POINT EACH)

17. Which method of cooking above would you recommend for cooking hamburger?

18. Which nutrient in meat greatly influences the way meat should be cooked?

19. Explain how to broil meat.

20. Explain how to pan broil meat.

Activity 45: Seafood

Competencies addressed by this activity:

04.	**Demonstrate the Management of Food for Individuals and Families**
04.03	Practice Food Safety and Sanitation Techniques
04.05	Demonstrate Meal Planning Issues and Techniques
05.	**Demonstrate the Preparation of Nutritious Foods for Individuals and Families**
05.04	Explore and Prepare Nutritious Foods Using Meat, Poultry, Fish, Eggs and Legumes

Activity: 45

SEAFOOD

Seafood can be divided into two general groups: fin fish and shellfish. Fin fish come from both saltwater and freshwater and has scales and fins. Shellfish are known as mollusks and are enclosed in a hard shell. Some examples of mollusks are oysters, clams and scallops. Crustaceans are the other type of shellfish and have a segmented outer shell. Some common examples of crustaceans are lobsters, crabs and shrimp.

Fish contains much less fat than red meats. The flesh of fish with a high fat content is yellow, pink or gray in color while the flesh of fish with less fat is white. Fat fish include salmon, mackerel and tuna; the lean fish include haddock, cod and halibut. Most of the shellfish have little fat and are lean.

FORMS OF FISH

Fish is available in many different forms. It is fresh, frozen, canned, cured and pickled. Pickled fish is cured in a brine that contains vinegar and pickling spices. After being heat processed, the pickled fish is packed into jars. About half of the fish in the United States is fresh or frozen.

Most commonly found in markets are whole or round fish. This is fish as it is just from the water. The scales and insides must be removed before it is cooked. Drawn fish has had only the insides removed. Dressed fish is ready for cooking. Fish steaks are cross-section slices of dressed fish. Very large fish such as halibut and salmon are usually sold as steaks. A fillet comes from one side of the fish.

The inspection and grading of fish for wholesomeness is voluntary. The United States Department of Interior supervises the grading program and identifies it with an inspection stamp.

The nutrients contributed by fish are similar to those of meat. They both contain complete proteins, minerals, vitamins and fat. Fish contains less fat than meat. Because of this, it will supply fewer calories.

Fish contains iodine, which helps regulate the thyroid gland. No other food contains an adequate supply of this mineral. For this reason, it is added to salt. Look on the label for the word "iodized" to make sure you are getting enough of this nutrient. Without enough iodine, the thyroid gland enlarges and must work extra hard, causing a condition called "goiter."

FISH COOKERY

Because fish is high in protein, it needs to be cooked at low temperatures to prevent toughening. Fish contains little connective tissue and cooks quickly. If it is cooked too long, it is apt to break apart.

All fish is tender and may be cooked by dry heat or moist heat methods. The fatty fish are best cooked by dry-heat methods and the lean fish by moist heat methods. Most of the time, fish is broiled, baked or poached. Poaching fish is done in gently simmering, seasoned water in a covered pan. The fish should be tied in cheesecloth to prevent it from breaking apart.

STORING FISH

All fish is very perishable. Fresh fish should be wrapped tightly in paper and placed in a covered container in the coldest part of the refrigerator. This prevents its odor from penetrating other foods. Fish should be used within a day or stored in the freezer. There are many convenience forms of fish. They include frozen fillets, steaks, fish sticks, pies and chowders. Remember that one usually has to pay a higher price for foods that have been processed.

SUMMARY QUESTIONS:

1. What are the two general types of seafood?
   FINFISH AND SHELLFISH

2. What do mollusks have on them?
   A HARD SHELL

3. What is the main nutrient found in fish that is not contained in other foods?
   IODINE

Activity 46: Poultry

Competencies addressed by this activity:

04.	**Demonstrate the Management of Food for Individuals and Families**
04.02	Demonstrate Basic Food Selection and Storage Techniques
04.03	Practice Food Safety and Sanitation Techniques
05.	**Demonstrate the Preparation of Nutritious Foods for Individuals and Families**
05.04	Explore and Prepare Nutritious Foods Using Meat, Poultry, Fish, Eggs and Legumes

Activity: 46

POULTRY

Poultry refers to all types of fowl served as the main part of a meal. Chicken and turkey are probably the most common types, although duck, geese, guinea and Cornish hens, squab and pigeons are other kinds.

Chicken was once reserved for a Sunday or holiday treat as it was quite expensive. Now it is often served any day of the week, because it is a low-cost and low-fat food that contains high quality protein.

You should look for inspection and grade labels when choosing poultry; they are clues to quality. This is your assurance that the poultry comes from healthy birds and is processed in sanitary surroundings. There are three different grades. Grade A poultry is full-fleshed and meaty. Grade B is good quality and is slightly less meaty. Grade C has less flesh and fat.

COOKING POULTRY

Poultry is classified by age and weight and is referred to as broilers, fryers, roasters and stewing birds. Young birds are tender; older birds are less tender. For young birds, broiling and roasting are preferred methods. For older birds it is wise to braise or cook in liquid. Whatever method you choose, be sure to use a low or moderate temperature so the meat is not toughened. When stewing poultry, the water should be simmering and not boiling.

Before preparing, rinse the cut pieces in cold water. If the bird is whole, run cold water into the cavity and remove any internal organs. The liver, heart, and gizzard are sometimes wrapped and placed inside the bird's cavity. These are called the giblets. Some people use the giblets as flavoring for sauces or gravies.

Dry the washed poultry with paper towels. If you are using a frozen bird, let it thaw by refrigerating it for 24 hours. When choosing frozen poultry, look for freezer burn which indicates long and improper storage and check the wrapper to be sure it is not stained or broken.

STORING POULTRY

Poultry is a very perishable food. Whole birds will last longer than cut-up birds. When storing, it should be wrapped loosely in plastic wrap and stored in the coldest part of the refrigerator for only two to three days. It may be stored for up to a year if wrapped well in freezer wrap and frozen.

SUMMARY QUESTIONS:

1. When stewing an older bird, do not let the water do what?
   BOIL

2. What are the liver, heart, and gizzard called?
   GIBLETS

3. How long will fresh poultry last in the refrigerator?
   TWO OR THREE DAYS

Activity 47: Internet "Egg" Assignment

Competencies addressed by this activity:

02.	**Analyze Nutrition, Health, and Wellness Practices Across the Life Span**
02.02	Evaluate the Nutrient Needs and Sources for Individuals and Families
04.	**Demonstrate the Management of Food for Individuals and Families**
04.02	Demonstrate Basic Food Selection and Storage Techniques
04.03	Practice Food Safety and Sanitation Techniques
05.	**Demonstrate the Preparation of Nutritious Foods for Individuals and Families**
05.04	Explore and Prepare Nutritious Foods Using Meat, Poultry, Fish, Eggs and Legumes

Activity:	**47**

INTERNET "EGG" ASSIGNMENT

Name Class

DIRECTIONS

Using the Internet, find the following addresses on the World Wide Web, read the information you find, and answer the following questions about eggs:

Web Site: www.aeb.org/food/eggs

1. For years, eggs have gotten bad publicity as a "forbidden food". According to the information you discover, explain why.

2. Has this idea of "forbidden food" changed? If so, how?

3. Cholesterol is not a_____. Cholesterol is produced by the_____.

4. Most people can normally consume_____without significantly raising blood cholesterol levels.

5. What are the 3 types of fat? Where do each come from?

Type of fat	***Where it comes from***
A.	
B.	
C.	

6. Blood cholesterol can be broken down into two major parts. Name the two parts and define characteristics of each.

Part	***Characteristics***
A.	
B.	

7. A large egg contains_____grams of fat,_____mg. of cholesterol, and_____calories each.

8. Salmonella is a bacteria found in the intestinal tract of most animals, fish, birds, insects, and people. Six symptoms of salmonella are:

A. B.

C. D.

E. F.

9. The majority of salmonella outbreaks are attributed to human carriers and_____

_____ through people, utensils and other forms.

10. All bacteria need 4 conditions to grow. These conditions are:

A. B.

B. D.

11. What is the danger zone?

12. What is the range of the danger zone?

13. Is it safe to eat raw eggs? Explain your answer.

14. What is the best way to store eggs?

15. What causes the egg white to become cloudy or yellowish-green?

16. What is the chalazae?

17. Some hard-cooked eggs may be hard to peel, why?

18. What are blood spots?

19. Draw and label all the parts of an egg as shown in the diagram you have found on the Internet. Make sure you explain the functions of each part.

INTERNET "EGG" ASSIGNMENT--KEY

Name: Class:

DIRECTIONS: Using the Internet, find the following addresses on the World Wide Web, read the information you find, and answer the following questions about eggs.

Web Site: www.aeb.org/food/eggs

1. For years, eggs have gotten bad publicity as a "forbidden food". According to the information you discover, explain why.

   BECAUSE OF CHOLESTEROL CONTENT

2. Cholesterol is not a____FAT____. Cholesterol is produced by the__LIVER____.

3. Most people can normally consume__1-2_____without significantly raising blood cholesterol levels.

4. What are the 3 types of fat? Where do each come from?

	Type of fat	***Where it comes from***
A.	SATURATED	Palm, kernel, and coconut Some vegetable oils (oil and cocoa butter)
B.	MONOSATURATED	Vegetable oils, (olive oil, canola oil, nuts, nut butter)
C.	POLYSATURATED	Vegetable fats—cooking oils and seafood

5. Blood cholesterol can be broken down into two major parts. Name the two parts and define characteristics of each.

	Part	***Characteristics***
A.	HDL—high density lipoprotein	Good cholesterol—helps move cholesterol back to liver for removal
B.	LDL—low density lipoprotein	Bad cholesterol—helps cholesterol stick to arteries

6. A large egg contains___4.5___grams of fat,____2/3_____mg. of cholesterol, and___70____calories each.

7. Salmonella is a bacteria found in the intestinal tract of most animals, fish, birds, insects, and people. Six symptoms of salmonellosis are:

A.	Stomach cramps	D.	Vomiting
B.	Nausea	E.	Headache
C.	Fever	F.	Diarrhea

8. The majority of salmonellosis outbreaks are attributed to human carriers and cross-contamination through people, utensils and other forms.

9. All bacteria need 4 conditions to grow. These conditions are:

A.	Food	C.	Moisture
B.	Ideal temperature—40-140 degrees	D.	Time—bacteria can double in 20 minutes

10. What is the danger zone?

39-140 –DEGREES BACTERIA GROW AND PROSPER

11. What is the range of the danger zone?

40-140--DEGREES

12. Is it safe to eat raw eggs? Explain your answer.

NO—THE RISK OF FOOD POISONING IS HIGHEST WITH RAW AND LIGHTLY COOKED EGG DISHES

13. What is the best way to store eggs?

IN CARTONS IN FRIDGE

14. What causes the egg white to become cloudy or yellowish-green?

CLOUDINESS—PRESENCE OF CARBON DIOXIDE UNABLE TO ESCAPE THROUGH SHELL
YELLOW-GREEN—INDICATES PRESENCE OF RIBOFLAVIN

15. What is chalazae?

ROPE-LIKE STRANDS OF WHITE EGG "ANCHOR"
YOLK IN CENTER OF THICK WHITE

16. Some hard-cooked eggs may be hard to peel, why?

THEY ARE FRESH. EGGS STORED UP TO ONE WEEK ARE EASIER TO PEEL.

17. What are blood spots?

"MEAT SPOTS"—RUPTURE OF BLOOD VESSEL ON YOLK SURFACE DURING FORMATION OF THE EGG.

18. Label all the parts of the following egg as shown in the diagram you have found on the Internet. Make sure you explain the functions of each part.

GET ANSWERS ON HAND-OUT FROM INTERNET

1 point for name of part
1 point for explanation of function

Activity 48: Leavening Experiment

Competencies addressed by this activity:

05.	**Demonstrate the Preparation of Nutritious Foods for Individuals and Families**
05.01	Demonstrate Basic Food Preparation Skills
05.05	Explore and Prepare Nutritious Foods Using Breads, Cereal, Rice, and Pasta

Activity: 48

LEAVENING EXPERIMENT

DIRECTIONS: Perform the following experiments for students.

THE EFFECT OF LIQUID ON BAKING SODA

½ cup water
1 tsp. baking soda
Place water in a beaker. Add baking soda to the water.
STIR. Top the beaker with a balloon.
Read the ingredients on a baking soda box.

THE EFFECT OF LIQUID ON BAKING POWDER

½ cup water
1 tsp. baking powder
Place water in a beaker. Add baking powder to the water.
STIR. Top the beaker with a balloon.
Read the ingredients on a baking powder can.

THE EFFECT OF LIQUID ON YEAST

½ cup water
1 tsp. yeast
Place water in a beaker. Add yeast.
Top the beaker with a balloon.

THE EFFECT OF LIQUID ON YEAST AND LIQUID

½ cup water
1 tsp. yeast
1 tsp. sugar

Place the water in a beaker. Add the sugar. Stir.
Add the yeast. Top the beaker with a balloon.
Stir.

Leavening agents make breads rise in the oven so they are light and porous (full of holes). Compare the sizes of the balloons. What conclusions can you make about leavening agents and the chemical reactions that take place?

Baking powder is made of baking soda, a dry acidic powder, and cornstarch. The taste of baking soda alone is quite objectionable, so an acid is added to make the flavor more pleasant.

Baking powder often contains sodium aluminum sulfate, which is a slow-acting acid. When using baking soda alone in a recipe, an acid such as vinegar, lemon juice or molasses is added to inhibit the strong baking soda flavor.

Baking powder is often referred to as double-acting. This means it works twice—once when first mixed with a liquid such as in the experiment above and again when heated. Baking powder is the leavening agent most often used in quick breads.

Yeast is a living organism, which is composed of living yeast plants. It is rich in B vitamins and protein. Yeast needs liquid, food and a warm temperature to rise. The food used in experiment #3 was sugar. When the sugar was added, the yeast was able to grow more than in experiment #2 because it then had food and moisture to grow new plants.

Yeast is not used in quick breads. It is used in leavening breads, rolls, breakfast cakes and raised doughnuts.

SUMMARY QUESTIONS:

1. What is a leavening agent?
   IT MAKES BREAD RISE SO THEY ARE LIGHT AND PEROUS.

2. What are the three main leavening agents?
   YEAST, BAKING POWDER, BAKING SODA

3. Which leavening agent is most often used in quick breads?
   BAKING POWDER

Activity 49: **Take a Close Look at Bread**

Competencies addressed by this activity:

04. **Demonstrate the Management of Food for Individuals and Families**

04.02 Demonstrate Basic Food Selection and Storage Techniques

05. **Demonstrate the Preparation of Nutritious Foods for Individuals and Families**

05.05 Explore and Prepare Nutritious Foods Using Breads, Cereal, Rice, and Pasta

Activity:	**49**

TAKE A CLOSE LOOK AT BREAD

LAB DIRECTIONS:

Have students examine a piece of 100 % whole wheat bread and a piece of white bread. Notice the cells or bubbles, which make up the pieces of bread. The leavening agent used to make bread is usually yeast. It releases carbon dioxide during baking which makes the bread rise. This leaves the little spaces or cells in the bread. The walls of these small cells are gluten which was made strong by the kneading of the dough. Compare and contrast the size and shape of the cells in the two kinds of bread. What caused the differences you observed?

SUMMARY QUESTIONS:

1. Does the brown bread or the white bread have larger cells?
   WHITE BREAD

2. Which kind of leavening agent is most often used in breads?
   YEAST

3. What is the name of the protein that makes up the cell walls in bread?
   GLUTEN

Activity 50: Pasta Demonstration

Competencies addressed by this activity:

04.	**Demonstrate the Management of Food for Individuals and Families**
04.02	Demonstrate Basic Food Selection and Storage Techniques
05.	**Demonstrate the Preparation of Nutritious Foods for Individuals and Families**
05.01	Demonstrate Basic Food Preparation Skills
05.05	Explore and Prepare Nutritious Foods Using Breads, Cereal, Rice, and Pasta

Activity: 50

PASTA DEMONSTRATION

Demonstrate how to make noodles either by hand or with a machine. Show students how to cook the noodles and how to know when they are done.

PASTA MAKER PASTA

3 eggs
3 Tbsp. oil
1-1/2 tsp. salt
3 cups sifted flour
About 3 Tbsp. water

Mix the eggs, oil and salt together in a mixer. Slowly add the flour. Add the water one tablespoon at a time. You may need to adjust this amount. Knead until smooth and elastic, about ten minutes. Cover the dough and let it rest for about ten minutes. Roll out and shape. After shaping, you may allow pasta to dry about two hours. Cook in salted, boiling water until tender. Drain and serve. (This pasta is much easier to handle if the recipe is cut in thirds)

EGG NOODLES

3 cups flour
3 egg yolks
1 egg
2 tsp. Salt
1/4-1/2 cup water

Place flour in a large mixing bowl. Make a well in the center of the flour. Add egg yolks, egg and salt. Mix well with a wooden spoon. Mix in water one tablespoon at a time until the dough is stiff, but still easy to roll out. Divide the dough into four equal parts. Roll one out at a time. Cover the dough not in use to prevent it from drying out. Roll into a paper thin rectangle on a floured counter. Loosely fold the dough in thirds. Cut crosswise into 1/8 inch wide strips or ¼ inch wide strips. Unfold strips and allow to dry for about two hours. Cook in salted, boiling water until tender. Drain and serve.

SUMMARY QUESTIONS:

1. What nutritious complete protein food is added to pasta?
   EGGS

2. How long should the pasta dry before cooking?
   TWO HOURS

3. How hot should the water be before adding the pasta?
   BOILING

Activity 51: Major Nutrients Found in Grains

Competencies addressed by this activity:

02. **Analyze Nutrition, Health, and Wellness Practices Across the Life Span**
02.02 Evaluate the Nutrient Needs and Sources for Individuals and Families

05. **Demonstrate the Preparation of Nutritious Foods for Individuals and Families**
05.05 Explore and Prepare Nutritious Foods Using Breads, Cereal, Rice, and Pasta

Activity: 51

MAJOR NUTRIENTS FOUND IN GRAINS

Proteins are a part of all living things. They are needed for the growth and repair of body tissues. Enzymes, hormones and antibodies are also proteins. Amino acids are the building blocks of protein. There are twenty different kinds, which form, break down and re-form into many different proteins. Nine of these cannot be made in the body and so must be eaten in food. They are considered to be essential.

Gluten is the protein that develops in flour when you add water or milk and beat the batter or knead the dough. The gluten stretches and surrounds the gas bubbles made by the yeast. As the gas expands, the batter or dough rises along with it. During the baking, steam and air also help the bread rise. The oven heat hardens the gluten. That is why bread holds its shape when removed from the pans.

Plant sources of protein are considered incomplete. The protein in grains is an incomplete protein. This means it does not contain all of the nine essential amino acids. For this reason, it is a good idea to combine grains with other protein sources like milk, cheese, meat or other grains so it will be better utilized by the body.

The chemical name for Vitamin B1 is thiamine. It was the first B vitamin to be discovered. The B vitamins are water soluble. Thiamine is lost through lengthy cooking and by standing in the cooking water for a long period of time. Thiamine is needed by the body for:

1. growth
2. good appetite
3. healthy nerves
4. good body coordination
5. helping the body release energy from carbohydrates

It prevents the deficiency disease, Beri Beri, which means "I cannot". This disease produces a swollen belly, mental problems, irritability, bad memory and lameness of the legs. (Beri Beri—I Cannot Walk)

In the 1800's the Japanese Navy was losing almost half of its men to this disease. Dr. Takiki was the physician in charge. Many thought the men were dying because of unsanitary conditions. Dr. Takaki knew his ships were as clean as the British ships, yet the British were not dying of the disease. Dr. Takaki decided to perform an experiment. Two shiploads of men went on a nine-month cruise. The first shipload ate only white polished rice. They had 169 cases of Beri Beri and 25 deaths.

The second shipload had less white rice to eat and also added barley, vegetables, meat and condensed milk. Only the 14 men who wouldn't eat other foods besides the rice got Beri Beri.

When they began feeding these men the other foods, they got well. Dr. Takaki discovered there was something in the variety of foods that kept the sailors from getting Beri Beri. Eventually, they isolated the vitamin, Thiamine.

Before this time, people had eaten brown rice which does not have the natural thiamine removed and so people did not get Beri Beri.

Wheat, barley and oats are about twice as rich in thiamine as rice. That is one reason it is important to eat a variety of cereal grains.

CARBOHYDRATES

There is a popular idea that carbohydrates are fattening. Many tests have proven that this is not necessarily so. Complex carbohydrates are excellent sources of energy, low in calories and have many vitamins and minerals as well.

There are two kinds of carbohydrates: simple and complex.

Simple carbohydrates are make of one or two sugars. Some of these are sugar, brown sugar, honey, jams, jellies and candy. These foods contain few, if any, nutrients.

Complex carbohydrates are composed of many sugars hooked together to form a long chain. Examples of these are starch and fiber. High starch foods include vegetables, breads and cereals. Food sources rich in fiber include bran, whole-grain breads and cereals, and skins of fruits and vegetables.

Complex carbohydrates are time release energy foods. Simple carbohydrates provide a quick lift that disappears in minutes. But with complex carbohydrates like those of pasta and whole grain breads, a chemical reaction must take place in the body first. The starch is slowly broken down into glucose—the ultimate food for brain and brawn. Glucose is stored in muscle tissue and the liver as glycogen. When you need it, the glycogen is released as glucose to supply energy and the stamina to win—whether a race or in school exams.

Two forms of carbohydrates are found in grains. Starch is used for body energy. Three-fourths of the grain is made up of starch.

Cellulose is found in the bran and is much more concentrated than that found in vegetables. Cellulose is needed by the body for regularity. It cannot be digested, but it supplies roughage or fiber. The fiber absorbs water and acts as a natural laxative. It is generally recognized that low-fiber diets can contribute to getting some forms of cancer.

SUMMARY QUESTIONS:

1. What is the chemical name for vitamin B1?
   THIAMINE

2. Lack of thiamine causes which deficiency disease?
   BERI BERI

3. Are grain products complete or incomplete proteins?
   INCOMPLETE